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PAPER

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Awards for Government Paper Are Announced

Joint Congressional Printing Committee Makes Contracts for the Year Beginning March 1—Barton, Duer & Koch Paper Co. Secures Major Portion With an Aggregate of Approximately 9,792,000 Pounds and R. P. Andrews Paper Co. Is Second With 7,812,000 Pounds. Many Prices Lower—Sources of Supply Changed

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 3, 1930.—Following its announcement a week ago the Joint Congressional Committee on Printing, met today, for the purpose of awarding contracts for the next contract year. There are several distinguishing features as between the bids for the ensuing year and those for the year that will end with March 1. The bidders securing the major portion were The Barton, Duer & Koch Paper Company with an aggregate of approximately 9,792,000 pounds with the R. P. Andrews Paper Company second with 7,812,000.

Turning to individual items with the exception of some of the grades of bond and a few of the Manilas all prices are materially lower than they were last year, running from a thousandth of a cent up to approximately 3 cents per 100 pounds below those of last year. The sources of supply have changed to a marked degree. In the largest order for printing paper, standard news print, for which 2,500,000 pounds were awarded to the Hudson Trading Company last year at 3.02 cents the quantity has been increased to 3,000,000 pounds, the price reduced to 3 cents, and the contract awarded to the Thomas J. McCormick Paper Corporation. Last year for the first seven classes of machine finished book paper the entire award was made to P. H. Glatfelter Company with a total of 7,300,000 pounds. This year the first three classes, or 2,800,000 pounds, went to the R. P. Andrews Paper Company, and 4,800,000 pounds to The Barton, Duer & Koch Paper Company. The next three classes, eleven to thirteen, inclusive, were awarded to Reese & Reese with a total of 1,550,000 pounds. This year R. P. Andrews gets it with an approximate increase to 1,750,000 pounds.

A new item in this years bidding was that of plant fiber machine finish book paper of which R. P. Andrews will supply 200,000 pounds. The Whitaker Paper Company supplied 125,000 of 50 per cent Rag light weight machine finish book. The contract for the same amount this year went to Dill & Collins at a price reduced from 10.10 cents to 9.90 cents. The Virginia Paper Company secured the contract for 700,000 pounds of 50 per cent rag machine finish book, which last year was supplied by the Allied Paper Mills and the Atlantic Paper Company, the aggregate orders being 505,000 pounds. All bids were rejected last year on 100 per cent rag machine finish book, which this year were awarded to the American Writing Paper Company. A supercalendered book which, last year, was, supplied by Reese & Reese for the first five classes, has been divided this year, one lot going to Reese & Reese, two to R. P. Andrews and two to Barton, Duer & Koch Paper Company.

Among other bidders who secured contracts last year and who did not bid this year, were the Allied Paper Mills, International Paper Company, The Import Paper Company, Esleeck Manufacturing Company, and the Republic Bag and Paper Company.

The Whitaker Paper Company secured all the awards for Manila card board, wood bristol board, railroad board and U. S. postal card board in which last year they shared with the R. P. Andrews Paper Company, Virginia Paper Company and the Old Dominion Paper Company. In each of these items the prices were reduced as compared with those at which the contracts were awarded last year. The Aetna Paper Company again secured the award of 30 per cent Rag Bond Papers, with the quantity increased from 4,650,000 to 5,030,000 pounds, prices in the majority of cases being slightly higher than those of last year. Six bids were rejected this year against 7 for last year.

The Awards

STANDARD NEWSPRINT

No. 1—3,000,000 pounds Standard Newsprint Paper; basis 24x36 inches, 64 pounds. Rolls, 24, 36 and 48 inches wide (3-inch fiber cores with metal ends): Thos. J. McCormick Paper Corporation, New York City, 3.00 cents.

MACHINE-FINISH BOOK

No. 3—800,000 pounds Machine-Finish Book Paper; basis, 25x38 inches, 70 pounds. Flat, cut 24x32, 28x38, and 31¼x45½ inches: R. P. Andrews Paper Company, Washington, D. C., 5.22 cents.

No. 4—1,000,000 pounds Ditto; basis, 25x38 inches, 70 pounds. Flat, cut 24x38 and 38x48 inches: R. P. Andrews Paper Company, 5.22 cents.

No. 5—1,000,000 pounds Ditto; basis 25x38 inches, 70 lbs. Flat, cut 24x38 and 38x48 inches: R. P. Andrews Paper Company, 5.22 cents.

No. 6—800,000 pounds Ditto; basis, 25x38 inches, 70 pounds. Rolls, 18, 21, and 23 inches wide: The Barton, Duer & Koch Paper Company, Washington, D. C., 4.90 cents.

No. 7—1,500,000 pounds Machine-Finish Book Paper; basis, 25x38 inches, 70 pounds. Rolls, 19 and 38 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 4.90 cents.

No. 8—1,500,000 pounds Machine-Finish Book Paper: basis, 25x38 inches, 70 pounds. Rolls, 19 and 38 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 4.90 cents.

No. 9—1,000,000 pounds Machine-Finish Book Paper; basis, 25x38 inches, 70 pounds. Rolls, 24, 36 and 48 inches wide, (3-inch iron cores): The Barton, Duer & Koch Paper Company, 4.90 cents.

No. 10—300,000 Machine-Finish Book Paper; basis 25x38 inches, 80 pounds. Rolls, 32 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 4.65 cents.

No. 11—1,200,000 pounds Machine-Finish Book Paper, basis, 25x38 inches, 80 pounds. Flat, cut 24x38, 33¾x64 and 38x48 inches: R. P. Andrews Paper Company, 495 cents.

No. 12—500,000 pounds Machine-Finish Book Paper, basis, 25x38 inches, 100 pounds. Flat, cut 22¼x32¼, 24x38, 24¼x36¼, 32x42, 38x48 and 41x52 inches: R. P. Andrews Paper Company, 4.90 cents.

No. 13—50,000 pounds Machine-Finish Book Paper, bases, 25x38 inches, 120 and 140 pounds. Flat, cut 24x30, (grain as ordered) 29x41 and 38x48 inches. Minimum order 7,500 pounds: R. P. Andrews Paper Company, 5.10 cents.

No 14—50,000 pounds Colored Machine-Finish Book Paper, blue and salmon; bases, 25x38 inches, 70 and 100 pounuds. Flat, cut 25x38 and 38x48 inches. Minimum order, one color, 5,000 pounds: Reese & Reese Inc., Baltimore, Md., 7.00 cents.

MACHINE-FINISH BOOK

For use on Monotype Machines

No 15—100,000 pounds Machine-Finish Book Paper, for use on monotype machines; basis 25x38 inches, 100 pounds. Rolls, 27 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 5.10 cents.

No. 16—200,000 pounds Plant Fiber Machine Finish Book Paper; basis, 25x38 inches, 40 pounds. Rolls, 19, 38 and 48 inches wide (3-inch iron cores): R. P. Andrews Paper Company, 8.48 cents.

No. 17—80,000 pounds Machine-Finish Book End Paper for waste leaves. Flat, 25x38 inches, 160 pounds; the grain to run the 38-inch way; The Old Dominion Paper Company, Norfolk, Va., 5.688 cents.

ANTIQUE BOOK

No. 18—50,000 pounds antique Book Paper. Basis 25x38 inches, 100-pounds. Flat, cut 25x38 and 38x50 inches. P. H. Glatfelter Company, Spring Grove, Pa., 5.16 cents.

LIGHT WEIGHT MACHINE-FINISH BOOK

No. 19—100,000 pounds light weight Machine-Finish Book Paper, basis 25x38 inches, 60-lbs. Flat, cut 32x48 and 38x48 inches. P. H. Glatfelter Company, 6.79 cents.

50 PER CENT RAG LIGHT-WEIGHT HIGH MACHINE-FINISH BOOK

No. 20—125,000 pounds 50 per cent Rag Light Weight High Machine Finish Book Paper, basis 25x38 inches, 60 pounds. Flat, cut 32x48 and 38x48 inches: Dill & Collins Company, Philadelphia, Pa., 9.90 cents.

No. 21—150,000 pounds 50 per cent Rag Machine-Finish Book Paper, basis, 25x38 inches, 80 pounds. Flat, cut 32x48 inches: Virginia Paper Company, Inc., Washington, D. C., 8.66 cents.

No. 22—450,000 pounds 50 per cent Ray Machine-Finish Book Paper, basis, 25x38 inches, 80 pounds. Flat, cut 38x48 inches: Virginia Paper Company, Inc, 8.61 cents.

No. 23—100,000 pounds 50 per cent Rag Machine-Finish Book Paper, bases, 25x38 inches, 80 and 90 pounds. Flat, cut any size, minimum width 24 inches, maximum width 42 inches: Virginia Paper Company, Inc., 8.66 cents.

100 PER CENT RAG MACHINE-FINISH BOOK

Highest Quality, Permanent for Records

No. 24—40,000 pounds 100 per cent Rag Machine-Finish Book Paper; basis, 25x38 inches, 90 pounds. Flat, cut 38x48 inches, the grain to run lengthwise of the Sheet: American Writing Paper Company, Inc., Holyoke, Mass., 25.50 cents. (White shirt cuttings).

No. 25—40,000 pounds 100 per cent Rag Machine-Finish Book Paper; basis, 25x38 inches, 140 pounds. Flat, cut 38x48 inches, the grain to run lengthwise of the sheet: American Writing Paper Company, Inc., 25.50 cents.

SUPERCALENDERED BOOK

No. 26—90,000 pounds Supercalendered Book Paper; basis, 25x38 inches, 90 pounds. Flat, cut 32x48 inches, minimum order 15,000 pounds: Reese & Reese, Inc., Baltimore, Md., 5.26 cents.

No. 27—550,000 pounds, Supercalendered Book Paper; basis, 25x38 inches, 90 pounds. Flat, cut 31¼x45½ inches: R. P. Andrews Paper Company, 5.22 cents.

No. 28—1,000,000 pounds Supercalendered Book Paper; basis, 25x38 inches, 90 pounds. Flat, cut 24x38 and 38x48 inches: R. P. Andrews Paper Company, 5.22 cents.

No. 29—900,000 pounds Supercalendered Book Paper; basis, 25x38 inches, 90 pounds. Rolls 38 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 5.00 cents.

No. 30—900,000 pounds Supercalendered Book Paper; basis, 25x38 inches, 90 pounds. Rolls 38 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 5.00 cents.

No. 31—40,000 pounds Supercalendered Book Paper; bases, 25x 38 inches, 90 and 100 pounds. Flat, cut any size, minimum width 24 inches; maximum width 42 inches. Minimum order one weight 20,000 pounds:Barton, Duer & Koch Paper Company, 5.05 cents.

50 PER CENT RAG SUPERCALENDERED BOOK

No. 33—50,000 pounds 50 per cent Rag Supercalendered Book Paper; bases, 25x38 inches, 80 and 90 pounds. Flat, cut 32x48 inches. Minimum order, one weight, 12,000 pounds: Atlantic Paper Company, Philadelphia, Pa., 9.39 cents.

HALF TONE BOOK

No. 34—180,000 pounds Half-Tone Book Paper; basis, 25x38 inches, 140 pounds. Flat, cut 24x38 inches and 38x48 inches: R. P. Andrews Paper Company, 5.20 cents.

SINGLE-COATED BOOK

No. 35—500,000 pounds Single-Coated Book Paper; basis, 25x38 inches, 140 pounds. Flat, cut 29x41, 38x48, and 41x52 inches; the grain to run lengthwise of the sheet; The Whitaker Paper Company, Baltimore, Md., 6.889 cents.

DOUBLE-COATED BOOK

No. 36—150,000 pounds Double-Coated Book Paper; bases 25x38 inches, 140 and 160 pounds. Flat, cut 24x32 inches, 24x38 and 38x 48; the grain to run lengthwise of the sheet; The Whitaker Paper Company, 7.219 cents.

50 PER CENT RAG DOUBLE-COATED BOOK

No. 37—50,000 pounds 50 per cent Rag Double-Coated Book Paper; bases, 25x38 inches; 140 and 160 pounds. Flat, cut 24x32 inches, 24x38, 32x42, 38x48 and 41x52 inches; the grain to run lengthwise of the sheet: R. P. Andrews Paper Company, 11.35 cents.

MACHINE-FINISH LITHOGRAPH

No. 39—70,000 pounds Machine-Finish Lithograph Paper; basis, 25x38 inches, 160 pounds. Flat, cut 19x24 and 24x38 inches; grain lengthwise of sheet: Dobler & Mudge, Baltimore, Md., 5.40 cents.

50 PER CENT RAG MACHINE-FINISH LITHOGRAPH

No. 40—80,000 pounds 50 per cent Rag Machine-Finish Lithograph Paper; basis, 25x38 inches, 160 pounds. Flat, cut 26x38 inches; the grain to run lengthwise of the sheet: Atlantic Paper Company, Philadelphia, Pa., 9.39 cents.

MIMEOGRAPH PAPER

Ground Wood Mimeograph

No. 41—40,000 pounds Ground Wood Mimeograph Paper; No. 40. Flat, cut 24½x30½, 24½x32, 24½x38, and 26x42½ inches; the grain to run lengthwise of the sheet: The Barton, Duer & Koch Paper Company, 4.93 cents.

CHEMICAL WOOD MIMEOGRAPH, WHITE AND COLORED

No. 43—1,500,000 pounds White Chemical Wood Mineograph Paper, Nos. 40 and 48. Flat, cut 24½x30½, 24½x32, 24½x38 and 26x42½; the grain to run lengthwise of the sheet: Jessup & Moore Paper Company, Philadelphia, Pa., 4.96 cents.

No. 44—100,000 pounds Colored Ditto; blue, buff, green, pink and yellow, No. 40. Flat, cut 24½x30½, 24½x32, 24½x38 and 26x42½ inches; the grain to run lengthwise of tthe sheet. Minimum order, one color, 5,000 pounds; American Writing Paper Company, Inc., Holyoke, Mass., 7.35 cents.

30 PER CENT RAG MIMEOGRAPH

No. 47—1,200,000 pounds 30 per cent Rag Mimeograph Paper, Nos. 40 and 48. Flat, cut 24½x30½, 24½x32, 24½x38, 26x42½ and 28½x34½ inches; grain to run lengthwise of the sheet; Jessup & Moore Paper Company, 7.17 cents.

WRITING PAPER

No. 51—700,000 pounds Blue U. S. M. O. Safety Writing Paper; No. 32. Rolls, 11 and 22 inches wide, 24 inches in diameter (3-inch iron cores): Perfect Safety Paper Company, Holyoke, 8.47 cents.

U. S. M. O. WRITING
White and Blue

No. 52—20,000 pounds White and Blue U. S. M. O. Writing Paper, No. 32, rolls 8½ inches wide, 24 inches in diameter (3-inch iron cores). Minimum Order, either color, 4,000 pounds; The Perfect Safety Paper Company, 8.00 cents.

SAFETY WRITING, COLORED

No. 53—5,000 pounds Colored Safety Writing Paper, Blue, Gray, Green, Pink, Salmon and Yellow, No. 40. Flat, cut 17x28, 21x32 and 22x34 inches. Minimum order, one color, 1,000 pounds: The Perfect Safety Paper Company, 12.25 cents.

SULPHITE WRITING, WHITE AND COLORED

No. 55—800,000 pounds White Sulphite Writing Paper, No. 32. Flat, cut 21x32, 22x34, 24x38, 26x34½, 28x34 and 32x42 inches: Dobler & Mudge, 5.96 cents.

No. 56—600,000 pounds White Sulphite Writing Paper, Nos. 40 and 48. Flat, cut 21x32, 22x34, 23x36, 24x38, 28x34, and 5.349 cents.
cents.

No. 57—150,000 pounds White Sulphite Writing Paper, No. 26. Rolls, Minimum width 16 inches, maximum 38 inches. (3-inch iron cores): The Barton, Duer & Koch Paper Company, 6.35 cents.

No. 58—250,000 pounds White Sulphite Writing Paper, No. 32. Rolls, Minimum width 16 inches, maximum width 38 inches. (3-inch iron cores): The Whitaker Paper Company, 5.389 cents.

No. 59—500,000 pounds White Sulphite Writing Paper, Nos. 40 and 48. Rolls, Minimum width 16 inches, maximum width 38 inches. (3-inch iron cores): The Whitaker Paper Company, 5.349 cents.

No. 60—15,000 pounds colored Sulphite Writing Paper, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow. Flat, cut 21x32, 22x34, 24x38 and 28x34 inches. Minimum order, one color, 5,000 pounds: The Barton, Duer & Koch Paper Company, 7.70 cents.

No. 61—550,000 pounds Colored Sulphite Writing Paper, Blue Buff, Cherry, Green, Pink, Salmon and Yellow. Nos. 32 and 40. Flat, cut 21x32, 22x34, 24x38, 27x35, 28x34 and 32x42 inches. Minimum order, one color, 10,000 pounds: The Old Dominion Paper Company, 6.524 cents.

100 PER CENT RAG WHITE WRITING, VELLUM FINISH, TUB-SIZED, AIR-DRIED

No. 63—5,000 pounds 100 per cent Rag White Writing Paper, Vellum Finish, Tub-Sized, Air-dried, No. 56. Flat, cut 21x32 inches. Minimum order 2,500 pounds: The Old Dominion Paper Company, 21.09 cents.

MAP PAPER

No. 64—30,000 pounds Lithograph Finish Map Paper, Nos. 32 and 40. Flat, cut 24x38, 30x40, 32x48, 36x52 and 38 x 48 inches. Minimum order, one substance 5.000 pounds: R. P. Andrews Paper Company, 9.39 cents.

50 PER CENT RAG LITHOGRAPH FINISH MAP, TUB-SIZED AIR-DRIED

No. 65—200,000 pounds 50 per cent Rag Lithograph Finish Map Paper, tub-sized, air-dried, Nos. 40, 48 and 56. Flat, cut 34x64, 36x44, 36x52, 38x44, 38x48, 40x52, 41x50 and 44x64 inches; the grain to run lengthwise of the sheet: The Barton, Duer & Koch Paper Company, 11.82 cents.

75 PER CENT RAG LITHOGRAPH FINISH MAP, TUB SIZED, AIR-DRIED

No. 66—150,000 pounds 75 per cent Rag Lithograph Finish Map Paper, tub-sized and air-dried, Nos. 32 and 40. Flat, cut 24x38, 30x40, 32x48, 36x52, 38x48, 40x52 and 44x64 inches; The grain to run lengthwise of the sheet: The Barton, Duer & Koch Paper Company, 16.39 cents.

No. 67—40,000 pounds 75 per cent Rag Lithograph Finish Paper, tub-sized, air-dried, Nos. 48 and 56. Flat, cut 38x44, 41x50, 44x54 and 44x64 inches; the grain to run lengthwise of the sheet. Minimum order, one substance, 5,000 pounds: The Barton, Duer & Koch Paper Company, 16.39 cents.

100 PER CENT RAG WHITE CHART LITHOGRAPH FINISH, TUB-SIZED, AIR-DRIED

No. 69—200,000 pounds 100 per cent Rag White Chart Paper, Lithograph Finish, tub-sized, air-dried, No. 96. Flat, cut any size, minimum width 22 inches, maximum width 46 inches; without markers; the grain to run lengthwise of the sheet unless otherwise specified; R. P. Andrews Paper Company, 23.92 cents.

MANIFOLD PAPER

No. 70—150,000 pounds White Sulphite Manifold Paper, No. 18. Flat, cut 17x28, 19x24, 21x32 and 22x44 inches; the grain to run 21-inch way on 21x32 inch size: Cauthorne Paper Company, Inc., Richmond, Va., 8.166 cents.

No. 71—5,000 pounds Colored Sulphite Manifold Paper, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow, No. 18. Flat, cut 17x28, 19x24, 21x32 and 22x34 inches; the grain to run 21-inch way on 21x32 inch size. Minimum order, one color, 5,000 pounds: Marquette Paper Company, Chicago, Ill., 9.00 cents.

50 PER CENT RAG MANIFOLD, WHITE AND COLORED

No. 73—50,000 pounds 50 per cent Rag, White Manifold Paper, No. 14. Flat, cut 17x28, 19x24, 21x32 and 22x34 inches; the grain to run 21-inch way on 21x32 inch size. Minimum order 5,000 pounds: American Writing Paper Company, Inc., 18.58 cents.

No. 74—450,000 pounds Ditto, No. 18. Flat, cut 17x28, 21x32, 22x34, and 24x38 inches; the grain to run 21-inch way on 21x32, inch size: R. P. Andrews Paper Company, 15.90 cents.

No. 75—15,000 pounds 50 per cent Colored Rag Manifold Paper, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow, No. 14. Flat, cut 17x28, 19x24, 21x32 and 22x34 inches; the grain to run 21-inch way on 21x32 inch size: American Writing Paper Company, Inc., 21.15 cents.

No. 76—75,000 pounds Ditto, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow, No. 18. Flat, cut 17x28, 21x32, 22x34 and 24x38 inches; the grain to run 21-inch way on 21x32 inch size. Minimum order one color, 5,000 pounds: American Writing Paper Company, Inc., 17.50 cents.

100 PER CENT RAG MANIFOLD, WHITE AND COLORED, TUB-SIZED, AIR-DRIED

No. 78—35,000 pounds 100 per cent Rag White Manifold Paper, tub-sized, air-dried, No. 14. Flat, cut 17x28, 19x24, 21x32 and 22x34 inches; the grain to run the 21-inch way on 21x32 inch size. Minimum order 5,000 pounds: The Old Dominion Paper Company, 36.967 cents.

No. 79—25,000 pounds Ditto, No. 18. Flat, cut 17x28, 19x24, 21x32, and 22x34 inches; the grain to run the 21-inch way on 21x32 inch size. Minimum order 5,000 pounds: The Old Dominion Paper Company, 31.217 cents.

No. 80—20,000 pounds Colored Ditto, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow, No. 14. Flat, cut 17x28, 19x24, 21x32, 22x34 and 26x32 inches; the grain to run the 21-inch way on 21x32 inch size. Minimum order, one color, 3,000 pounds: The Whitaker Paper Company, 39.50 cents.

No. 81—25,000 pounds Ditto, No. 18. Flat, cut 17x28, 21x32, 22x34 and 24x38 inches; the grain to run the 21-inch way on 21x32 inch size. Minimum order, one color, 500 pounds: The Whitaker Paper Company, 34.50 cents.

50 PER CENT RAG WHITE GLAZED MANIFOLD

No. 83—60,000 pounds 50 per cent Rag White Glazed Manifold Paper, No. 16. Flat, cut 19x24 and 21x32 inches; the grain to run the 21-inch way on 21x32 inch size. Minimum order 10,000 pound: Dobler & Mudge, 24.74 cents.

BOND PAPER

No. 101—25,000 pounds White Sulphite Bond Paper, No. 26. Flat, cut any size, minimum width 17 inches, maximum width 32 inches. Minimum order 5,000 pounds: Cauthorne Paper Company, Inc., 6.98 cents.

No. 102—1,000,000 pounds Ditto, Nos. 32 and 40. Flat, cut any size, minimum width 17 inches, maximum width 32 inches: Dobler & Mudge, 6.26 cents.

No. 103—10,000 pounds Ditto, No. 48. Flat, cut any size, minimum width 17 inches, maximum width 32 inches. Minimum order 5,000 pounds: The Barton, Duer & Koch Paper Company, 6.26 cents.

No. 104—100,000 pounds Colored Sulphite Bond Paper, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow. Nos. 32 and 40. Flat, cut any size, minimum width 17 inches, maximum width 32 inches. Minimum order, one color, 5,000 pounds: Cauthorne Paper Company, Inc., 7.156 cents.

No. 105—10,000 pounds Ditto, No. 48. Flat, cut any size, minimum width 17 inches, maximum with 32 inches. Minimum order one color, 2,000 pounds: The Barton, Due & Koch Paper Company, 7.27 cents.

30 Per Cent Rag Bond, White and Colored Tub-Sized and Air-Dried

No. 109—250,000 pounds 30 per cent Rag White Bond Paper; Tub-sized, Air-dried, No. 26. Flat, cut 21x32, 23x36, 24x38 and 28x34 inches: The Aetna Paper Company, Dayton, Ohio, 13.01 cents.

No. 110—800,000 pounds Ditto; No. 32. Flat, cut any size. Minimum width 17 inches, maximum width 32 inches: The Aetna Paper Company, 10.21 cents.

No. 111—1,000,000 pounds Ditto; No. 40. Flat, cut any size, minimum width 17 inches, maximum width 32 inches: The Aetna Paper Company, 9.81 cents.

No. 112—1,000,000 pounds Ditto; No. 40. Flat, cut any size, minimum width 17 inches, maximum width 32 inches: The Aetna Paper Company, 9.81 cents.

No. 113—900,000 pounds Ditto; No. 48. Flat, cut any size, minimum width 17 inches, maximum width 32 inches: The Aetna Paper Company, 9.81 cents.

No. 114—125,000 pounds 30 per cent Rag Colored Bond Paper; Tub-sized, Air-dried, blue, buff, cherry, green, pink, salmon and yellow. No. 26. Flat, cut any size, minimum width 17 inches, maximum width 32 inches. Minimum order, one color, 3,000 pounds: The Aetna Paper Company, 16.11 cents.

No. 115—350,000 pounds Ditto; No. 32. Flat, cut any size, minimum width 17 inches, maximum width 32 inches: The Aetna Paper Company, 11.91 cents.

No. 116—300,000 pounds Ditto; No. 40. Flat, cut any size, minimum width 17 inches; maximum width 32 inches: The Aetna Paper Company, 11.31 cents.

No. 117—300,000 pounds Ditto; No. 48. Flat, cut any size, minimum width 17 inches; maximum width 32 inches: The Aetna Paper Company, 11.31 cents.

50 Per Cent Rag Bond, White and Colored Tub-Sized and Air-Dried

No. 120—50,000 pounds 50 per cent Rag White Bond Paper, Tub-sized, Air-dried, No. 26. Flat, cut 21x32, 23x36, 24x38 and 28x34 inches: The Barton, Duer & Koch Paper Company, 14.70 cents.

No. 121—1,000,000 pounds Ditto; Nos. 32 and 40. Flat, cut, any size, minimum width 17 inches; maximum width 32 inches: The Aetna Paper Company, 11.91 cents.

No. 122—100,000 pounds Ditto; No. 48. Flat, cut any size. Mimimum width 17 inches; maximum width 32 inches: R. P. Andrews Paper Company, 11.65 cents.

No. 123—15,000 pounds 50 per cent Rag Colored Bond Paper, Tub-sized and Air-dried. Blue, buff, cherry, green, pink, salmon and yellow. Nos. 26, 32 and 40. Flat, cut any size, minimum width 17 inches, maximum width 32 inches. Minimum order, one color, one substance, 2,500 pounds: The Barton, Duer & Koch Paper Company, 13.77 cents.

75 Per Cent Rag White Bond Tub-Sized and Air-Dried

No. 125—6,000 pounds 75 per cent Rag White Bond Paper; Tub-sized, Air-dried, No. 26. Flat, cut any size, minimum width 17 inches; maximum width 32 inches. Minimum order, 2,500 pounds: The Barton, Duer & Koch Paper Company, 21.75 cents.

No. 126—10,000 pounds Ditto; Nos. 32, 40 and 48. Flat, cut any size, minimum width 17 inches; maximum with 32 inches. Minimum order, one substance, 2,500 pounds: The Barton, Duer & Koch Paper Company, 17.95 cents.

100 Per Cent White Bond, Tub-Sized, Air-Dried

No. 128—12,000 pounds Rag White Bond Paper, Tub-sized, Air-dried, Nos. 32 and 40. Flat, cut any size, minimum width 17 inches; maximum width 32 inches. Minimum order, one substance, 2,000 pounds: Atlantic Paper Company, 23.74 cents.

No. 129—8,000 pounds Ditto; No. 48. Flat, cut any size, minimum width 17 inches; maximum width 32 inches. Minimum order 2,000 pounds: Atlantic Paper Company, 23.74 cents.

Declaration Bond, Tub-Sized, Air-Dried

No. 130—12,000 pounds Declaration Bond Paper; Tub-sized, Air-dried. Nos. 32 and 42. Flat, cut 17x22 and 22x25½ inches. Minimum order, one substance, 3,000 pounds: The Old Dominion Paper Company, 25.74 cents.

Parchment Deed, White and Cream, Tub-Sized, Air-Dried

No. 131—4,000 pounds White and Cream Parchment Deed Paper; Tub-sized, Air-dried. No. 64. Flat, cut 33x34 inches. Minimum order 2,000 pounds: The Barton, Duer & Koch Paper Company, 26.00 cents.

Ledger Paper

No. 151—35,000 pounds White Sulphite Ledger Paper; Nos. 56 and 64. Flat, cut any size. Minimum width 17 inches; maximum width 32 inches. Minimum order, one substance, 5,000 pounds: The Aetna Paper Company, 7.14 cents.

No. 152—50,000 pounds Ditto; No. 80. Flat, cut any size, minimum width 17 inches; maximum width 32 inches. Minimum order 5,000 pounds: The Aetna Paper Compony, 7.14 cents.

No. 153—10,000 pounds Colored Sulphite Ledger Paper; blue, buff, green, pink, salmon and yellow, No. 80. Flat, cut 21x32½ inches. Minimum order, one color, 2,000 pounds: The Whitaker Paper Company, 8.62 cents.

30 Per Cent Rag Ledger, White and Colored, Tub-Sized, Air-Dried

No. 154—25,000 pounds 30 per cent Rag White Ledger Paper; Tub-sized, Air-dried, Nos. 48 and 56. Flat, cut 20x28, 21x32, 24x38, 28x29, and 28x34 inches. Minimum order, one substance, 5,000 pounds: Atlantic Paper Company, 10.59 cents.

No. 155—15,000 pounds Ditto; No. 64. Flat, cut 21x32 and 23x36 inches. Minimum order 5,000 pounds: Atlantic Paper Company, 10.59 cents.

No. 156—15,000 pounds Ditto; No. 72. Flat, cut 20x28, 21x32, 24x38, and 28x34 inches. Minimum order 5,000 pounds: Atlantic Paper Company, 10.89 cents.

No. 157—18,000 pounds 30 per cent Rag Colored Ledger Paper; Tub-sized, Air-dried; blue, buff, green, pink, salmon and yellow. Nos. 56, 64 and 72. Flat, cut 21x32, 23x36, 24x38 and 28x34 inches. Minimum order, one substance, one color, 3,000 pounds: The Barton, Duer & Koch Paper Company, 12.20 cents.

50 Per Cent Rag Ledger, White and Colored, Tub-Sized, Air-Dried

No. 160—100,000 pounds 50 per cent Rag White Ledger Paper: Tub-sized, Air-dried, Nos. 48 and 56. Flat, cut, 18½x36, 18½x40¼, 20x28, 21x32, 24x38, 28x29 and 28x34 inches. Minimum order, one substance, 5,000 pounds: R. P. Andrews Paper Company, 12.00 cents.

No. 161—60,000 pounds Ditto; No. 64. Flat, cut 21x32 and 23x36 inches. Minimum order 5,000 pounds: R. P. Andrews Paper Company, 12.00 cents.

No. 162—90,000 pounds Ditto; Nos. 72 and 80. Flat, cut 20 x 28, 21x32, 44x38 and 28x34 inches: R. P. Andrews Paper Company, 12.00 cents.

No. 163—50,000 pounds Ditto; No. 80. Flat, cut 21x32½ inches. Minimum order 5,000 pounds: R. P. Andrews Paper Company, 12.00 cents.

No. 164—70,000 pounds 50 per cent Rag Colored Ledger Paper; Tub-sized, Air-dried; blue, buff, cherry, green, pink, salmon and yellow. Nos. 56, 64 and 72. Flat, cut 18½x36, 18½x40¼, 19x24, 21x32, 23x36 and 28x34 inches. Minimum order, one substance, one color, 3,000 pounds: The Barton, Duer & Koch Paper Company, 13.07 cents.

No. 165—40,000 pounds Ditto; blue, buff, cherry, fawn, green, pink, salmon and yellow, No. 88. Flat, cut 21x32½ inches. Minimum order, one color, 5,000 pounds: The Barton, Duer & Koch Paper Company, 13.07 cents.

75 PER CENT RAG LEDGER, WHITE AND COLORED, TUB-SIZED, AIR-DRIED

No. 168—30,000 pounds 75 per cent Rag White Ledger Paper; Tub-sized, Air-dried, Nos. 48 and 56. Flat, cut 21x32, 24x38, 28x29 and 28x34 inches. Minimum order, one substance, 5,000 pounds: R. P. Andrews Paper Company, 14.64 cents.

No. 169—30,000 pounds Ditto; No. 64. Flat, cut 21x32, 23x36, 24x38 and 28x34 inches. Minimum order 5,000 pounds: R. P. Andrews Paper Company, 14.64 cents.

No. 170—40,000 pounds Ditto; Nos. 72 and 80. Flat, cut 20x28, 21x32, 24x38 and 28x34 inches. Minimum order, one substance, 5,000 pounds: R. P. Andrews Paper Company, 14.64 cents.

No. 171.—20,000 pounds Ditto, No. 88. Flat, cut, 21x32½ inches. Minimum order, 5,000 pounds: R. P. Andrews Paper Company, 14.64 cents.

No. 172.—50,000 pounds 75% Rag Colored Ledger Paper, Tub sized, air-dried, Blue, Buff, Cherry, Green, Pink, Salmon and Yellow, Nos. 56, 64, and 72. Flat, cut 19x24, 21x32, 23x36, and 28x34 inches. Minimum order, one substance, one color, 3,000 pounds: The Barton, Duer & Koch Paper Company, 16.17 cents.

No. 173.—12,000 pounds Ditto, Blue, Buff, Cherry, Fawn, Green, Pink, Salmon and Yelloy, No. 88, Flat, cut 21x32½ inches. Minimum order one color 4,000 pounds: The Barton, Duer & Koch Paper Company, 16.17 cents.

100 PER CENT RAG WHITE LEDGER
Tub-Sized, Air-Dried

No. 176.—30,000 pounds 100 per cent Rag White Ledger Paper, Tub-sized, air-dried, No. 48, Flat cut, 21x32, 22¾x31½, 23x36, 24x38 and 28x34 inches. Minimum order, 5,000 pounds: Carew Manufacturing Company, South Hadley Falls, Mass., 23.87 cents. (New White and unbleached Cotton Cuttings)

No. 177—50,000 pounds Ditto, No. 56. Flat, cut 20x28, 21x32 23x36 and 24x38 and 28x34 inches. Minimum order 5,000 pounds. Carew Manufacturing Company, 23.87 cents. (New White and unbleached Cotton Cuttings)

No. 178.—25,000 pounds Ditto, No. 64. Flat, cut 18½x42, 21x32, 23x36 and 28x34 inches. Minimum order 5,000 pounds: Carew Manufacturing Company, 23.87 cents. (New White and Unbleached Cotton Cuttings)

No. 179.—15,000 pounds Ditto, No. 72. Flat, cut 20x28, 21x32, 24x38 and 28x34 inches. Minimum order 5,000 pounds: Carew Manufacturing Company, 23.87 cents. (New White and Unbleached Cotton Cuttings).

No. 180.—8,000 pounds Ditto, No. 80. Flat, cut 21x32½, and 21x42 inches. Minimum order 4,000 pounds: Dobler & Mudge, 23.60 cents. (No. 1, White Canvas, New)

No. 181.—30,000 pounds Ditto, No. 88. Flat, cut 20½x24¾, 21x 32½ and 22¾x31½ inches. Minimum order 5,000 pounds: Dobler & Mudge, 23.50 cents. (No. 1, White Canvas, New)

INDEX PAPER

No. 184.—60,000 pounds White Sulphite Index, Single-ply. Bases, 22½x28½, 182 and 230 pounds. Flat, cut 21x32½, 22½x28½ and 24½x32½ inches, with projecting colored-paper marker between each 100 sheets. Minimum order, one weight, 10,000 pounds: Virginia Paper Co., Inc., Washington, D. C., 6.60 cents.

No. 185.—5,000 pounds Ditto, 22½x28½ inches, 280 and 362 pounds. Flat, cut 21x32½ and 22½x28½ inches, with projecting colored-paper marker between each 100 sheets. Minimum order one weight 2,500 pounds: Walker-Goulard-Plehn Company, New York City, 7.65 cents.

No. 186.—6,000 pounds Colored Sulphite Index, Single-Ply, Blue, Buff, Fawn, Green, Pink, Salmon, and Yellow. Bases 22½x28½ inches, 182 and 230 pounds. Flat cut, 21x32½ and 22½x28½ inches, 182 and 230 pounds. Flat cut, 21x32½ and 22½x28½ inches, with projecting colored-paper marker between each 100 sheets. Minimum order, one color, one weight, 2,000 pounds: Bids rejected.

No. 187.—6,000 pounds Ditto, Bases 22x28½ inches, 280 and 362 pounds. Flat, cut 21x32½ and 22½x28¼ inches, with projecting colored-paper marker between each 100 sheets. Minimum order, one color, one weight, 2,000 pounds: Bids rejected.

50 PER CENT RAG INDEX, WHITE AND COLORED, SINGLE-PLY

No. 190.—120,000 pounds 50 per cent Rag White Index, Single-Ply; basis, 22½x28½ inches; 182 and 230 pounds. Flat, cut 21x 32½ and 22½x28½ inches. With projecting colored-paper marker between each 100 sheets. Minimum order, 5,000 pounds: Virginia Paper Co., Inc., 12.25 cents.

No. 191.—15,000 pounds, Ditto, Basis 22½x28½ inches, 280 and 362 pounds. Flat cut, 21x32½ and 22½x28½ inches, with projecting colored-paper markers between each 100 sheets. Minimum order, one weight 5,000 pounds: Virginia Paper Co., Inc., 14.50 cents.

No. 192.—90,000 pounds 50 per cent Rag Colored Index, single-ply; Blue, Buff, Fawn, Green, Pink, Salmon and Yellow; 22½x28½ inches, 182 and 230 pounds. Flat cut, 21x32½, 22½x28½ inches, with projecting colored-paper marker between each one of the sheets. Minimum order, one color, one weight, 5,000 pounds: Virginia Paper Company, Inc., 14.00 cents.

No. 193.—35,000 pounds Ditto, basis 22½x28½ inches, 280 and 362 pounds. Flat, cut 21x32½ and 22½x28¼ inches, with projecting colored-paper marker between each 100 sheets. Minimum order, one color, one weight, 5,000 pounds: Virginia Paper Company, Inc., 14.50 cents.

100 PER CENT RAG INDEX, WHITE AND CREAM, SINGLE-PLY
Tub-sized, Air-dried

No. 196.—140,000 pounds 100 per cent Rag, White and Cream Index, single-ply, tub-sized, air-dried; Basis 22½x28½ inches, approximately 206 pounds. Flat, cut 20½x30½ and 21x32½ inches: The Barton, Duer & Koch Paper Company, 20.63 cents.

TISSUE PAPER

No. 197.—5,000 pounds White Tissue Paper. Flat, 21x32 inches, 18-lbs. Minimum order 1,000 pounds: The Old Dominion Paper Company, 10.98 cents.

FACING STEREO TISSUE

No. 198.—1,000 pounds Facing Stereo Tissue; basis 19x24 inches, 9-lbs. Rolls 24 inches wide (3-inch iron cores). Minimum order 500 pounds: Cauthorne Paper Company, Inc., 84.68 cents.

COVER PAPER

No. 201.—200,000 pounds Colored Coated Cover Paper, India Tint, Light Green, Light Gray and Primrose. Flat, 26½x41 inches, 208 pounds: The Whitaker Paper Company, 7.169 cents.

25 PER CENT RAG MACHINE-FINISH COVER, COLORED

No. 203.—25,000 pounds 25 per cent Rag Colored Antique, Machine-Finish Cover Paper, Wuaker Drab, Robin's Egg, and Terra Cotta. Flat, 20x25 inches, 96 pounds. In wrapped bundles, with projecting colored-paper marker between each 500 sheets. Minimum order one color, 2,500 pounds: R. P. Andrews Paper Company, 7.24 cents.

No. 204.—120,000 pounds, 25 per cent Rag Colored, Smooth, Machine-Finish Cover Paper, Blue, Brown, Granite, Green, Pink, Tea, and Yellow; base 20x26 inches, 100 pounds. Flat, cut 20x25 and 33 x46 inches, in wrapped bundles with projecting colored paper markers between each 500 sheets. Minimum order, one color, 5,000 pounds: R. P. Andrews Paper Company, 7.19 cents.

50 per cent Rag Laid Cover, Colored

No. 205.—10,000 pounds, 50 per cent Rag Colored laid cover paper (Manufacturers' Stock Shades) blue, buff, cream, white, gray, green and terra cotta, basis 20x26 inches. 130 pounds. Flat cut, 20x25 and 26½x41 inches, in wrapped bundles, with projecting colored paper markers between each 500 sheets. Minimum order one color, 1,250 pounds: R. P. Andrews Paper Company, 10.65 cents.

50 Per Cent Rag Antique Cover, Colored

No. 206.—75,000 pounds, 50 per cent Rag colored antique cover paper, Dawn, Gobelein Blue, Khaki, moss Green, sage and suede. Flat 20x25 inches, 96-pounds, in wrapped bundles with projecting colored-paper markers between each 500 sheets. Minimum order, one color, 5,000 pounds: R. P. Andrews Paper Company, 8.34 cents.

Manila Paper

No. 209.—300,000 pounds Wood-Manila paper; bases 24x36 inches, 60 to 120 pounds, Flat, cut 21x32 and 25x38 inches, in wrapped bundles, with projecting colored-paper markers between each 500 sheets: Thoj. J. McCormick Paper Corporation, 3.72 cents.

No. 210.—500,000 pounds Ditto. Rolls, 9, 18 and 21 inches wide (3-inch iron cores; except 9-inch rolls, which shall be wound on wooden plugs, 1½ inch holes: Thos. J. McCormick Paper Corporation, 3.47 cents.

Sulphite Manila

No. 211.—40,000 pounds Sulphite Manila Paper; bases 24x36 inches, 100 to 160 pounds. Flat, cut any size, in wrapped bundles of 500 sheets each. Minimum order, 10,000 pounds: The Barton, Duer & Koch Paper Company, 6.28 cents. (Racquette River Paper Co., Potsdam, N. Y.)

No. 212.—80,000 pounds Ditto, basis 24x36 inches, 160 pounds. Rolls 18 inches wide (3-inch iron cores): The Barton, Duer & Koch Paper Company, 6.20 cents. (Racquette River Paper Co., Potsdam, N. Y.)

Rope Manila

No. 213.—30,000 pounds Rope Manila Paper; bases, 24x36 inches, 120, 140, and 160 pounds. Rolls 48 inches wide (3-inch iron cores). Minimum order 10,000 pounds: Reese & Reese, Inc., 12.50 cents.

No. 214.—45,000 pounds Ditto, basis 24x36 inches, 280-pounds. Rolls 48 inches wide. (3-inch iron cores). Minimum order 15,000 pounds: Reese & Reese, Inc., 11.50 cents.

Kraft Paper

No. 217.—300,000 pounds No. 2 Kraft Wrapping Paper; Basis 24x36 inches, 60 to 160 pounds, flat-cut, any size, in wrapped bundles of 500 sheets each: The Whitaker Paper Company, 4.065 cents.

No. 218.—450,000 pounds Ditto, bases 24x36 inches, 60 to 100 pounds, Cut any size; fold (25 sheets per fld), in wrapped bundles of 500 sheets each: The Whitaker Paper Company, 4.065 cents.

219.—250,000 pounds Ditto, basis 24x36 inches, 60 to 160 pounds. Rolls, 11½, 24, 36, 39 and 48 inches wide, wound on wooden plugs, 1½ inch hole, or on 3-inch iron cores as may be specified: The Whitaker Paper Company, 3.815 cents.

No. 220.—20,000 pounds, No. 1 Kraft Paper, basis 24x36 inches, 120 and 160 pounds, Flat, cut any size, wrapped bundles of 500 sheets: The Whitaker Paper Company, 5.18 cents.

Manila Tag Board;

No. 221.—200,000 pounds High-Finish Sulphite Manila Tag Board; basis, 24x36 inches, 160 to 280 pounds. Flat, cut any size, minimum width 24 inches. Maximum width 38 inches. In wrapper bundles of 500 sheets each: Reese & Reese, Inc., 6.40 cents. (Warren Mfg. Company)

Calendered Tag, Manila and Colored

No. 224.—500,000 pounds Manila Calendered Tag Board; basis 22½x28½ inches, approximately 148 pounds; minimum thickness .0062 inch; maximum thickness .0070 inch. Rolls, 23½ and 26¾ inches wide (6-inch iron cores): All bids rejected.

No. 225.—200,000 pounds Colored Calendered Tag Board, Blue, Brown, Green, Pink, Red Salmon and Yellow; basis 22½x28½ inch, approximately 148 pounds; minimum thickness, .0062 inch; maximum thickness, .0070 inch. Rolls 23½ and 26¾ inches wide (6-inch iron cores) Minimum order, one color, 5,000 pounds: All bids rejected.

Jute Tag

No. 227.—120,000 pounds Jute Tag Board; basis, 22½x28½ inches, 200 to 280 pounds. Flat, cut any size, minimum width 22 inches; maximum width 32 inches. In wrapped bundles of 500 sheets each. Minimum order, one weight, 5,000 pounds: Reese & Reese, Inc., 8.00 cents.

Cardboard

No. 301.—40,000 pounds Manila Cardboard; basis 22½x28½ inches, 400 pounds. Flat, cut 17x28, 21x32, and 22½x28½ inches, in wrapped bundles of 500 sheets, with projecting colored-paper marker between each 100 sheets. Minimum order 5,000 pounds: The Whitaker Paper Company, 5.53 cents.

Railroad Board White and Colored

No. 302.—70,000 sheets White Railroad Board. Flat, 22x28 inches, 4-ply, each 100 sheets fully banded, packed in wooden cases, minimum order 5,000 sheets. Minimum order 10,000 sheets: The Whitaker Paper Company, $25.53.

No. 303.—10,000 sheets Ditto, 8-ply, each 100 sheets fully banded, packed in wooden cases, Minimum order 5,000 sheets: The Whitaker Paper Company, $37.53.

No. 304.—15,000 sheets Ditto, 14-ply; each 50 sheets fully banded, packed in wooden cases, minimum order 5,000 sheets: The Whitaker Paper Company, $56.16.

No. 305.—200,000 Sheets Colored Railroad Board, Ash Gray, Blue, Buff, Green, Lemon and Orange. Flat, 22x28 inches, 4-ply, each 100 sheets fully banded, packed in wooden cases, minimum one color 5,000 sheets: The Whitaker Paper Company, $28.00.

Wood Bristol, Colored

No. 306.—60,000 pounds Colored Wood Bristol Board, Buff; basis 22½x28½ inches 150-pounds. Rolls 22 inches wide. (6-inch iron cores): The Old Dominion Paper Company, 4.597 cents.

No. 307.—200,000 pounds Ditto, Blue, Buff, Gray, Green, Melon, Pink, Quaker Drab and Yellow. Flat, 21x31 inches, 204 pounds. In wrapped bundles of 500 sheets each, with projecting colored-paper marker between each 100 sheets: The Whitaker Paper Company, 4.53 cents.

No. 308.—300,000 pounds Ditto, Blue, brown, buff, gray, green, melon, pink and yellow; based 22½x28½ inches, 200 pounds. Rolls 20 inches, (6-inch iron cores: The Whitaker Paper Company, 4.53 cents.

No. 309.—300,000 pounds Ditto, basis 22½x28½ inches, 200 pounds. Rolls 20 inches wide (6-inch iron cores): The Witaker Paper Company, 4.53 cents.

No. 310.—100,000 pounds Ditto, Buff; basis 22½x28½ inches; 200-pounds. Flat, cut, 12x18 and 14½x17½ inches, the grain to run lengthwise of the sheet, in wrapped bundles of 500 sheets each: The Whitaker Paper Company, 4.53 cents.

U. S. Postal Card Bristol

No. 311.—11,000,000 pounds U. S. Postal Card Bristol Board; basis 22½x28½ inches, 188 pounds. Rolls 33 inches wide and 34 inches in diameter, 6-inch iron cores: The Whitaker Paper Company, 4.4285 cents.

Miscellaneous Paper

No. 351.—8,000 pounds White Paraffin paper. Flat, 24x38 inches, 32 pounds. Minimum order, 1,000 pounds: The Whitaker Paper Company, 11.875 cents.

No. 352.—300,000 pounds White Gummed Paper. Flat 17x22 inches 49 pounds, exclusive of weight of gum used. Minimum order 50,000 pounds: Virginia Paper Company, Inc., $5.84.

No. 353.—10,000 pounds White Gummed Paper. Flat, 20x25 inches 54 pounds, exclusive of weight of gum used. Minimum order 5,000 sheets: R. P. Andrews Paper Company, $7.61.

No. 354.—20,000 pounds White Blotting Paper. Flat, 19x24 inches, 160 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order 4,000 pounds: The Whitaker Paper Company, 5.845 cents.

No. 355.—20,000 sheets Colored Blotting Paper (Manufacturer's stock shade), buff and salmon. Flat, 19x24 inches, 160 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order 4,000 pounds: R. P. Andrews Paper Company, 5.93 cents.

25 PER CENT RAG BLOTTING, WHITE AND COLORED

No. 356.—30,000 pounds 25 per cent Rag White Blotting paper. Flat, 19x24 inches, 160 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order, 4,000 pounds: The Whitaker Paper Company, 6.865 cents.

No. 357.—12,000 pounds 25 per cent Ditto, Colored (Manufacturer's Stock shade), buff and salmon. Flat, 19x24 inches, 160 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order, 1 color, 4,000 pounds: R. P. Andrews Paper Company, 6.98 cents.

No. 358.—25,000 pounds Desk Blotting paper (Manufacturer's stock shade), blue and buff. Flat, 19x24 inches, 200 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order, one color, 5,000 pounds: The Old Dominion Paper Company, 5.967 cents.

No. 359.—125,000 pounds moss-green Desk Blotting Paper. Flat, 19x24 inches, 200 pounds, in wrapped bundles of 250 or 500 sheets. Minimum order, 10,000 pounds: The Whitaker Paper Company, 6.385 cents.

No. 360.—4,000 pounds White Sterotype Molding Paper for paper process; basis, 19x24 inches, 120 pounds. Rolls, 24 inches wide (3-inch iron cores). Minimum order 1,000 pounds: The Old Dominion Paper Company, 9.64 cents.

No. 361.—3,000 pounds Red Sterotype Molding Paper for paper process; basis 19x24 inches, 80 pounds. Rolls, 24 inches wide (3-inch iron cores) Minimum order, 1,000 pounds: All bids rejected.

No. 362.—30,000 pounds Oiled Manila Tympan Paper; basis 24x36 inches, approximately 200 pounds. Rolls 38, 48 and 55 inches wide; maximum weight 150 pounds; wound on wooden plugs, 1½-inch hole. Minimum order 5,000 pounds: The Whitaker Paper Company, 7.91 cents.

No. 363.—2,000 pounds Plate-wiping paper for embossing presses; basis 24x36 inches, 100 pounds. Rolls, 24 inches wide (3-inch iron cores). Minimum order 1,000 pounds: The Barton, Duer & Koch Paper Company, 7.95 cents.

No. 364.—6,000 pounds Back-lining paper for Case-Making Machines; basis 24x36 inches, 180 pounds. Rolls, 12 inch diameter, 9⅛, 11⅜ and 24 inches wide, wound on wooden plugs, 1 or 1½ inch hole. Minimum order, 2,000 pounds: Lindemeyer & Harker, Baltimore, Md., 4.21 cents.

No. 365.—30,000 sheets Red Pressboard. Flat, 24x32 inches, thickness .0140 inch. Minimum order 5,000 sheets: Lindemeyer & Harker, $5.60.

No. 366—30,000 sheets Gray Pressboard. Flat 30x36 inches, thickness .0300 inch. Minimum order 5,000 sheets: Lindemeyer & Harker. $18.75 (C. L.) $19.23 (LCL).

No. 401.—3,000 pounds News Board. Flat, 26x38 inches, No. 100. (To be trimmed square on four sides) Minimum order, 1,000 pounds: The Virginia Paper Company, Inc., 2.23 cents.

No. 402.—800,000 pounds Chip Board, basis 26x38 inches, No. 50. Flat, cut 21½x32½, 24½x38, 26x38, 28½x34½, and 32½x42½: Reese & Reese, Inc., 1.618 cents.

No. 403.—40,000 pounds Marble Grained lined Board; basis 26x38 inches, No. 50. Flat, cut 22x32: The Whitaker Paper Company, 3.73 cents.

No. 404.—40,000 pounds Strawboard, Flat, 26x38 inches, No. 50: Walker-Goulard-Plehn Company, 2.25 cents.

No. 405.—10,000 pounds Strawboard. Flat, 26x38 inches, No. 50: The LaBoiteaux Company, Cincinnati, Ohio, 3.10 cents (CL); 3.645 cents (LCL).

No. 406.—80,000 pounds Lined Boxboard, lined one side, basis 26x38 inches, No. 40 Flat, cut 24½x34 inches. Minimum order 36,000 pounds: The La Boiteaux Company, 2.22 cents.

No. 407.—800,000 pounds Binders Board, hard rolled, No. 2 quality. Flat, 25x30 inches, Nos. 16, 18, 20, 25, 30, and 40. Minimum order 36,000 pounds: All bids rejected.

No. 408.—100,000 pounds Binders Board, hard rolled, best quality. Flat, 20x30 inches, and 22x28 inches, Nos. 18, 20, 25, 30, 35, 40 and 45: The Barton, Duer & Koch Paper Company, 5.50 cents.

C-E Multiple Retort Stoker

The Combustion Engineering Corporation has issued a new catalog illustrating and describing the C-E Multiple Retort Stoker. This catalog was produced by the Aquatone Process, as developed by the Printing House of William Edwin Rudge, and is one of the first catalogs pertaining to industrial equipment to be printed in Aquatone. Although the stock used throughout has no finish whatever, the half-tone illustrations are beautifully reproduced, and even the finest detail shows up clearly.

The Super-Station Type C-E Multiple Retort Stoker described in this catalog is a camparatively new design, and is the result of three years' extensive research and development work. The results secured in the various installations now in operation indicate that this stoker is establishing new performance standards in the multiple retort field.

A copy of this catalogue may be obtained by applying to the Combustion Engineering Corporation, 200 Madison avenue, New York.

Import Committee Has Busy Year

In checking over the activities of the year 1929 it was surprising to the staff of the Import Committee to realize that the number of new cases handled during the year was nearly the highest in the Committee history, the problems arising totaling 583, only fifteen fewer than in the busiest year of the committee history.

Twenty-one importations of fancy embossed papers are before the United States Customs Court on a finding by the customs officials that the shipments were undervalued. The authorities, finding no correct home value, have levied duty on the basis of the United States value and the importers have protested this action to the court.

Kraft wrapping paper from Sweden has been held by the United States Customs Court to have been undervalued when imported at Galveston. An importation of printing paper at Galveston shipped from Sweden was similarly held to have been undervalued.

Finnish Pulp and Paper Markets Quiet

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 3, 1930.—The Finnish pulp and paper markets are on the whole very quiet. News print buyers appear to be holding off awaiting the announcement of prices in North America, while no improvement is to be noted in the demand for other classes of paper. The chemical pulp market shows little activity; a majority of the recent contracts concluded being for sulphite and easy bleaching sulphate at unaltered prices. The kraft and ground wood markets are dull, and while an improvement has been noted in the demand for wood pulp boards; it has not yet affected prices.

Paper and Pulp Production Gains in Norway

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., February 3, 1930.—A radiogram from Commercial Attache Lund, at Oslo, reports that paper and pulp production in Norway and exports last year were approximately 5 per cent above those for 1928. The present outlook in the industry, however, is not altogether satisfactory; the bleached pulp market is somewhat weaker while the unbleached pulp market remains about the same, and the paper market continues dull. The ground wood market maintains a firm tone, which is attributed to the effect of the production agreement entered into by the Scandinavian and Finnish producers.

Canadian Pulp and Paper Men Meet at Montreal

Howard Crabtree Is Chosen To Head the Canadian Pulp and Paper Association at the Seventeenth Annual Convention—Meeting Is Largely Attended and Reports Show That Members Are Cooperating Splendidly for the General Advancement of the Industry

MONTREAL, Que., February 3, 1930.—The 17th annual general meeting of the Canadian Pulp and Paper Association, which was held here last week, proved the most successful, considered from every point of view, that has ever been held in the history of the organization. Not only was the attendance on a larger scale than ever, but never before have the reports presented shown the members co-operating in so wide a field of activities for the general advancement of the industry.

Last year's annual meeting was an especially gratifying one because the members for the first time met in the permanent quarters of the association provided in the new Pulp and Paper Research Institute. This year's meeting found the experimental paper mill at the Institute in full operation, and a competent staff at work on a comprehensive programme of research from which already some valuable results have been obtained.

Then again, there was a highly satisfactory report on the expansion of the association's efforts for providing technical education for mill workers, a work that has now reached a point where any mill in any part of the country can receive proper assistance for the education of its employees.

Of course, as was the case last year, ths disturbed situation in the news print industry cast somewhat of a shadow over the proceedings, but as against this it was possible to report that the worst fears had not been realized, and that there was evidence of a steady improvement in the outlook which improvement, it was confidently anticipated, would eventually overcome the evils attendant upon over-expansion.

Two Features of Special Note

Two features of the proceedings call for special note. One was the strong protest which was registered against the drawback of 80 per cent of the duty on importations of book paper, a concession made on behalf of certain Canadian magazine publishers. This has resulted in an increase in importation from 1,076,171 lbs. in 1927 to 5,689,720 lbs. in the 11 months up to the end of November last. The other feature was a warning to the producers of mechanical pulp that, having little or no home market, they were operating under very precarious conditions; that, in fact, they were gambling with fate. Their efforts, they were advised, should tend towards carrying their operations one stage further, or else towards some form of permanent arrangement with consumers of their product.

An Additional Grant to the Institute

An important resolution passed at the meeting was one making an additional grant of $20,000 to the Pulp and Paper Research Institute for carrying on its work during the year. This made the total grant for the Institute $47,000.

The New President

Harold Crabtree, of the Howard Smith Paper Mills, Limited, Montreal, was unanimously elected president of the association for the ensuing year. Mr. Crabtree was born at Bury, Lancashire, England. in 1884, and came to Canada in 1892. He began his career as junior in the mill office of Alexander McArthur & Co., at Joliette, Que., and later became secretary-treasurer of Edwin Crabtree & Son, Limited, paper manufacturers at Crabtree Mills, Joliette County, Quebec, later merged with the Howard Smith Paper Mills, Limited. He was appointed secretary-treasurer of the last-named organization in 1917, and managing director in 1925, being promoted to the position of vice-president in 1928.

He is also vice-president of the Canada Paper Company, Limited, Montreal; vice-president of the Alliance Paper Mills, Limited, Kerritton, Ont.; and director of the Adams Paper Mills, Wells River, Vt.

The Annual Banquet

The annual President's banquet, held in the Ritz-Carlton Hotel on Friday evening, was largely attended, and bought a highly successful convention to a close. The principal speakers were the Hon. Rodolphe Lemieux, Speaker of the Federal House of Commons, the Hon. L. Alhanase David, Provincial Secretary and member of the Quebec Government, and Sir William Clark, High Commissioner for Great Britain in Canada.

Mr. Lemieux struck the keynote of the evening in a plea for conciliation in the news print situation. Mr. David followed by assuring the gathering that Quebec Province would protect invested capital provided that industrialists on their part fulfilled their obligations. He refused to admit a "crisis" in the pulp and paper industry, calling it a mere temporary difficulty which could be overcome if those within the industry would employ commonsense, the broad view, and a spirit of conciliation and co-operation. Sir William Clark delivered an exhortation for an advance in Empire trade, and here, too, he found that a necessary element was a genuine sentiment of get-together.

Col. Jones, the retiring president, in investing the new president, Mr. Crabtree with the gavel of office, admitted that 1929 had been a year for news print men more terrible in anticipation than in actual experience. He thought that, if manufacturers and publishers "went fishing together," much might be done for the industry; but he did not overlook the suggestion that, first of all "perhaps some of the manufacturers might go fishing by themselves just too start off with. On the whole, the bugaboo of expansion had been lessened by the increased demand for news print, and, with 1930 opening, it was still for pulp and paper men to say that "this is a grand, good, clean business of unlimited possibilities."

Supporting the president at the head table were J. H. A. Acer, L. R. Wilson, F. J. Campbell, H. F. E. Kent, C. McKer, F. W. Field, S. L. Wilson, H. Crabtree, Sir William Clark, Col. C. H. L. Jones, Hon. Rodolphe Lemieux, Hon. L. A. David, W. Frost, H. Bryon, W. Chisholm, George H. Montgomery, K. C., J. A. Bothwell and Col. J. H. Price.

Secretary Beck Makes Arrangements

Edward Beck, the energetic secretary of the association, was responsible for the general arrangements and provided a most interesting program. The annual meeting proper was preceded during the week by meetings of the various sections and committees, and at some of these valuable papers on technical subjects were read and discussed. The annual luncheon in connection with the meeting was as usual well attended, and there was a large attendance, including some notable guests, at the annual banquet held as a wind-up to the proceedings in the Ritz-Carlton Hotel tonight.

The President's Address

Col. C. H. L. Jones, who has been president of the Association for the past two years, called the annual general meeting to order, and his opening speech was as follows:

A perusal of the annual reports submitted by our several trade sections for this meeting reveals that the past year has dealt not altogether unkindly with our industry. Every Section reports growth and expansion, resulting in increased production.

The newsprint branch, which continues to constitute the backbone of the industry, while meeting with some difficulties due to too rapid development, has fared somewhat better, in many respects, than a purview at the outset of the year indicated might be the case. The worse things predicted for it failed to come to pass. A certain degree of stabilization was effected. The output of the mills during the year exceeded all preceding records by a wide margin, reaching the record figure of 2,728,827 tons. Not only was the domestic and United States demand greater than that of any other year, but overseas exports also enjoyed a marked increase, indicating that Canada is continuing to hold its own in the world's markets, notwithstanding that competition is growing more keen.

Public interest has been centered of late upon the fact that Canada is at present equipped to produce a greater volume of newsprint than the market can readily absorb. While this is true, and while it has resulted in reducing the general average of the output of the mills, based upon their rated capacity, practically no consideration has been given to the fact that every new mill built in Canada means that more of our pulpwood will be manufactured into paper in this country and less will be available for exportation to paper manufacturers elsewhere. There has been a relative decrease in the exports of pulpwood this year as compared with last. There is undoubtedly still too great a proportion leaving the country. The returns show that for the calendar year of 1929 the total shipments amounted to about 1,277,879 cords, which represents approximately 25 per cent of the total cut and compares with 1,301,200 cords, the average annual shipment for the past ten years. So long as pulpwood in such large quantities is permitted to leave the country in an unmanufactured state it would seem to be rather short-sighted to say that additional mills should not be built here. It is worth noting that one of the large enterprises due to come into operation this year will absorb the output of a pulpmill which has for many years past found its way out of the country without being manufactured into paper. To the extent of the difference of having the pulp worked up into paper here instead of elsewhere this new mill must be regarded as an asset to the industry and the country rather than a detriment.

The situation with respect to Sulphite Pulp and to Mechanical Pulp, as indicated by the reports of these Sections, showed considerable improvement during the year, markedly so in the case of mechanical pulp, which for the first time in five years enjoyed an active market at enhanced prices.

Book Paper Affected by Imports

The book and writing paper mills produced an increased tonnage, but report that they could have manufactured a still greater volume had the demand justified it. The detrimental effect of the tariff change, (permitting an 80 per cent drawback on certain importations of book paper), which became effective in March, 1928, were more marked during the year. Importations of book paper, under its operation, rose to more than six million pounds, an increase of 600 per cent above the figures of 1927, the year before the drawback became operative. It is quite clear that if the book paper industry is forced to continue to operate under this handicap it will be to its great and continually increasing detriment. A study of the report submitted by the Book and Writing Section is recommended to the members.

The Paperboard Section assumed a place of greater importance in the industry during the year. As in other lines there has been considerable expansion in this division and the mills are now equipped to take care not only of current needs but of those for some years to come. The Section has recently been reorganized and is now functioning on a better basis than for several years past. Credit for much of this improvement is due to the efforts of Louis Lemieux of the association's staff who, by direction of the Executive Committee, is devoting the greater part of his services to the affairs of the Section.

The various other Sections—those dealing with Coated Paper, Wrapping Paper, Felt, Kraft, Waxing Paper, Tissues—all report encouraging increases in business and a favorable outlook for the immediate future.

The Pulp and Paper Research Corporation report the completion of the Research Institute building. Of the special grant of $50,000 made to the Corporation at the last annual meeting, $7,520.53 has been turned back into the Association's treasury. All obligations in connection with the Corporation's bonded indebtedness maturing during the year have been met.

Pulp and Paper Research Institute

The Joint Administrative Committee of the Pulp and Paper Research Institute is submitting a comprehensive report of its activities during the year which invites careful and critical study. The Committee reports that the plant at the Institute is now in complete operation, that the several deparments are working harmoniously together with encouraging prospects for worthwhile results. Their report makes clear that increased financial support for the Institute is requisite and necessary and asks, specifically, that $20,000 additional be allotted to them, to be used or not at the discretion of the Committee. In connection with the work of this Committee I desire to call the attention of the membership at large to the services rendered by our representatives, F. A. Sabbaton, H. J. Buncke and John S. Bates. Attendance at the monthly committee meetings have entailed upon these gentlemen a very considerable outlay of time, money and effort, all of which have been ungrudgingly given without expense to the Association. Their knowledge and the results of their experience have also been freely placed at the disposal of the heads of the respective departments of the Institute and have been of the greatest value in getting the Institute properly organized and the program of work established. It is a pleasure to place on record the Executive's appreciation of their work, which I am sure will be shared by every member of our Association.

The Technical Section, it is agreeable to report, made very definite progress during the year. Under the able guidance of R. A. McInnis, the Chairman, the Section has expanded its membership and has added very considerably to the accumulated knowledge of the technical side of our industry. Not the least of its important contributions to the general benefit has been the assistance it has lent to the Joint Administrative Committee and the Pulp and Paper Division of the Forest Products Laboratories in the formation and the inauguration of a definite program of work. The Summer Meeting of the Section as well as the annual meeting held in Montreal this week, marked quite a new departure in the way of useful and practical achievement.

The Woodlands Section, under R. H. Nesbit's chairmanship, reports a year of enlarged activities. The membership has been increased by 20 per cent, and definite strides have been made in the direction of improved technique of logging and in dealing with problems arising in this the fundamental branch of our industry. A. M. Koroleff, the Section's expert advisor, has rendered capable service to the members, who have not hesitated to avail themselves of his knowledge and ability. The greater part of Mr. Koroleff's time, as a matter of fact, is occupied in visiting the various woods operations and giving the members the benefit of his experience and advice. Research work has been carried on, some of it in co-operation with McGill University, with such satisfactory results to the members that the Section's executives are requesting the Association to increase its annual grant in order that they may be undertaken on a still larger scale.

Association in Prosperous Condition

The affairs of the Association in general have been conducted with the usual degree of harmony and efficiency. While it was anticipated at the beginning of the year that a deficit might be encountered as a result of the somewhat unwonted expenditures authorized at the last annual meeting, it will afford the members satisfaction to know that we completed the year's business with a

fair balance to our credit. The membership has been enlarged during the year by the addition of the following new members: Eastern Paper and Felt Mills Corporation, Fraser Companies Limited, Mersey Paper Company Limited, Thunder Bay Paper Company Limited.

The Executive Committee has held the usual number of meetings and has kept in close touch with the affairs of the Association generally.

It is with regret that I record the passing of two of the outstanding leaders of our industry in the year that has gone. F. Howard Wilson, who for many years directed the affairs of J. C. Wilson, Limited, was known to most of our members. He took an active part in the organization, particularly that branch of it which included his own particular line of business, and at one time served our Association as its vice-president.

Emil R. Wallberg was also an outstanding figure in the paper industry in Canada, although entering it rather late in life. As president of the Company, he was largely responsible for the creation and successful inauguration of the Lake St. John Power and Paper Company, and was also associated with the Brompton Pulp and Paper Company.

In closing this report, may I be permitted to add a personal note to this somewhat inadequate review of the Association's year. The fact that you have honored me for two successive years by choosing me to serve as your head executive is one that I appreciate more than I can describe in words. The office has entailed responsibilities and has provided many contacts of a most agreeable character. As to the former I can only say that I have discharged the duties devolving upon me to the best of my ability. It has been a source of the utmost gratification that I have received the united support and the fullest co-operation from my colleagues of the Executive Committee as well as from the membership at large. As the members know, my chief interest in the Association's work during the past five years has been in connection with the development of the technical and research divisions of our activities. I have on more than one occasion been called upon to congratulate the Association upon the success of its efforts along these lines—efforts which have resulted in the establishment of the Pulp and Paper Research Institute with all that it implies. I feel, however, that we have but made a fair beginning and, if it is in order to impart advice to my successor and to the incoming Executive Committee, I would earnestly exhort them to keep up and to enlarge upon the work for which the foundations have now been laid. It will take courage, it will take money, it will take vision, to carry on and to achieve the high purpose we had in view when this movement was first inaugurated, but I am confident, as never before, that, given these things, the ultimate results will repay the Association and its members a thousandfold.

In conclusion, I bespeak for my successor the same active and loyal support that has been accorded me during my two years of office and for the Association as a whole continued progress and success in all of its undertakings.

Newsprint Section's Report

P. B. Wilson, chairman of the Newsprint Section, in his report, said: The year 1929 has been a trying one for the newsprint industry in Canada. While production and consumption have increased, the prices received for the commodity have been inadequate. For the first time for many years prices have been quoted to publishers with freight allowed to destination, the country being divided into zones for this purpose, the publishers paying the same delivery price within each zone and the manufacturers carrying any difference in freight between one part of a zone and another.

In 1928 it was seen that more mills were being built and more capacity being provided than could be absorbed by the publishers, even allowing for a reasonable increase in consumption. The situation became so acute that with the approval of the Premiers of Quebec and Ontario, the industry was organized under the name of the Newsprint Institute of Canada with a view to stabilizing production, dividing equitably the available orders amongst the mills and providing steady occupation in the communities which had grown up round them. The co-operation of the two Premiers had a very beneficial effect and nearly all of the mills in Eastern Canada became members of the Institute and shared equally between them the orders available.

Attitude of the Publishers

Believing that their customers, the publishers, require a stabilized market for newsprint, manufacturers sought to meet this condition by offering three-year contracts at a fair and reasonable price which provided for a rebate of $5.00 per ton for the first six months of 1930 to meet immediate general business conditions. This proposal, however did not meet with the general approval of the publishers as represented by the Paper Committee of the A.N.P.A. Some further effort should be made to bring the publishers and the manufacturers together in an arrangement designed to preserve for both that stability in a market in which they are mutually and vitally interested.

The industry enters the new year with the manufacturers receiving less for their product than will enable them to make anything like a satisfactory return. Those who have given the subject fair and impartial consideration will readily concede that the prices current during the past year have fallen short of providing an adequate return to shareholders, and likewise have unfortunately failed to allow for proper depreciation of timber resources.

Industry Fundamentally Sound

Fundamentally the industry is sound for the reason that here in Canada we have the raw material and the ability to manufacture it into a finished article for which there is a large and insistent demand.

The prospects for 1930 being equal to 1929 in consumption are good; consumption in 1929 was about 8 per cent greater than in 1928.

Canadian production of newsprint in 1929 was greater than in any previous year and the total tonnage, amounting to 2,728,827 tons, was greater than the output in 1928 by 347,725 tons, or nearly 15 per cent. Owing to the increased capacity, however, the mills were only able to operate at an average of 85 per cent. of rated capacity for the year. The mills in the United States maintained production at close to the level of the previous year, there being a decline of only 1.8 per cent in the output, total production for the year amounting to 1,392,276 tons.

The production of the mills in Newfoundland also increased in 1929, output for the year being 255,500 tons as compared with 230,745 tons produced in 1928.

Expansion of the Industry

Canadian exports of newsprint for the year amounted to 2,510,634 tons, an increase of almost 15 per cent. over the total for 1928. Of this amount, 2,173,087 tons were shipped to the United States, while overseas markets absorbed 337,547 tons, which is the highest figure ever reached for those markets. Shipments to England, 173,255 tons; Australia, 63,136 tons; South America, 50,904 tons, and New Zealand, 23,050 tons, accounted for the greater part of the overseas tonnage.

There was considerable expansion during the year and several new machines came into operation, while one new mill was erected. New machines were added by:

St Lawrence Paper Mills	2
Price Bros.	2
Bathurst Power & Paper	1
Great Lakes Paper Co.	1

and the new mill of the Mersey Paper Company at Brooklyn, N. S., with an estimated daily capacity of 250 tons.

Under construction at the present time are the Dalhousie Mill of the International Paper Company and the mill of the James Maclaren Company at Buckingham, P.Q. The former will have an initial capacity of 250 tons daily and is scheduled to commence operation early this year; the latter will have a similar capacity

and is expected to commence operation in the middle of this year.

There is also under construction a new news print mill at Bucksport, Me., which is to have a capacity of 250 tons daily and is scheduled to be in operation early next year.

	1929, Tons	1928, Tons	
Canadian production	2,728,827	2,381,102	+ 15 per cent
U. S. A.	1,392,276	1,417,572	— 2 per cent
Newfoundland	255,500	230,745	+ 11 per cent

Canadian exports:	1929, Tons	1928, Tons
To U. S. A.	2,173,087	1,934,889
England	173,555	130,700
Australia	63,136	48,808
New Zealand	23,050	17,267
South America	50,904	51,337
Total	2,510,634	2,206,587

New Machines:

St. Lawrence	2—156 tons
Great Lakes	1—160 tons
Bathurst	1— 70 tons
Price Bros.	2—240 tons
Mersey	2—250 tons

Total addition to capacity, approximately 880 tons daily.

Book and Writing Section

Harold Crabtree, in his report for the Book and Writing Section, said there was a total increase in production for the year 1929 of 6,000 tons. While this increase represents an advance over the previous year, it falls short of enabling the mills which have a maximum capacity of well over 100,000 tons to operate to their fullest extent, the total output of 67,408 tons representing an operation ratio of only 67.4% of possible production. To obtain even this output, the mills were forced to resort to the manufacture of a range of lower grade products which do not properly belong to the book and writing classification and which cannot be produced profitably by mills of such a high capital cost.

Importations of book and writing papers of all kinds for the year amounted to 9,239 tons or 13 per cent of the output of the Canadian mills.

The detrimental effect of the change in the tariff permitting a "drawback" of 80 per cent of the duty on importations of book paper used for certain classes of publications, has been emphasized during the past year since it was responsible for a very large increase in importations of paper under this heading, as is shown by the following returns of the Customs Department:

	1927 lbs.	1928 lbs.	1929 lbs.
Book Paper M. F. or S. C. exclusively for magazines, newspapers, etc.	1,076,171	4,804,613	5,689,720 (11 mos.)

(The 80% drawback became effective in March, 1928.)

Over a period of seven years, from 1922-1928, the annual consumption of book paper in Canada has averaged approximately 33,000 tons, and in the same period the average annual production of the Canadian mills was 32,000 tons.

Importations of book paper into Canada did not show much growth previous to 1928, but in that year there was a considerable increase due to the granting of a drawback already referred to. Some 1,500 tons of the paper thus imported consisted of rotogravure paper. This business, in the near future, it is expected will be tranferred to Canadian mills. Thus the importations of ordinary staple lines of book paper outside of those affected by the 80 per cent duty drawback are not large.

As illustrating the disadvantage under which Canadian mills operate as against the mass production of the mills in the United States, it may be stated that the production of book paper by United States mills in 1928 was 1,409,000 tons as compared with a Canadian production of 35,555 tons. On a per capita basis the consumption in the United States is approximately 23.5 lbs. while in Canada the per capita consumption is 7 lbs. or less than one-third of that of our neighbors.

Canada exports very little paper of this grade. Labor costs in this country are higher than in European producing countries, so much so as to make Canadian competition out of the question while high tariffs and heavy transportation rates also serve to restrict the market.

Imports of Writing Paper Small

The consumption of writing paper in Canada in 1928 amounted to about 31,000 tons and the average annual consumption for the past seven years was approximately 23,500 tons. There has been a steady but relatively small annual increase in consumption since 1923 and up till last year the exports were greater than the imports. The Canadian mills have been well able to take care of demand, the output each year, except in 1928, exceeding consumption.

Importations of writing paper are not large, the average for the past seven years amounting to but 511 tons. They consist chiefly of specialties, fancy papers, etc., for which the demand is insufficient to warrant their manufacture in Canada.

To sum up, it would seem that the Canadian mills are equipped to provide for the full domestic demand for book and writing papers for some years to come as well as to look after any normal increase that may arise.

There are other grades of paper imported into Canada, such as cover papers, vegetable parchment, blotting, glassine, etc., but generally speaking, these imports again consist in large part of specialties for which the demand is strictly limited. The small volume required by Canada is shipped here and sold at prices with which no Canadian mill can compete. They do not in any sense constitute a warrant for any expansion of the industry at the present time.

Sulphite Pulp Section

A. C. Cross, as chairman of the Sulphite Pulp Section reported as follows:

The sulphite mills report a year of steady business with prices fairly well maintained, production being well ahead of the output in the previous year. During 1928 the strike in Sweden had curtailed production, and as demand was good the year 1929 began with only small stocks on hand so that the mills were able to dispose of their product without difficulty and fairly stable conditions prevailed.

Production of paper both in Canada and in the United States was greater than in any previous year and the output of sulphite pulp increased correspondingly. Several new mills were added to the sulphite capacity of the United States and Scandinavia; others are projected for the coming year.

At the present time there is some uncertainty in the situation in Sweden owing to the fact that the agreement between employers and pulp mill workers expires at the end of January and the workers are asking for an advance in wages which the manufacturers are unwilling to concede. Negotiations have been carried on for some time, and probably there will be no interruption of operations.

Total Canadian exports of bleached and unbleached sulphite in 1929 were somewhat smaller than in the previous year, the increase of 6,000 tons of shipments of bleached pulp being more than offset by a decline of 14,000 tons in exports of unbleached pulp. Total exports of sulphite amounted to 415,939 tons, of which 332,727 tons, or 80 per cent, went to the United States.

The world demand for rayon or artificial silk continues to increase and with it the demand for bleached sulphite. In this respect Canada is maintaining her position, our exports of bleached sulphite having grown steadily for several years past.

At the beginning of the new year, the statistical position of the industry is good, and while the general business situation on this continent is not quite clear, underlying conditions are such that an expectation of satisfactory business seems justified.

Board Section

The improvement in the Paper Board industry, which was evidenced in this Section's report for 1928, has continued during the year now past, said Frank H. Thorn, chairman of that Section.

There has been a united effort by members to stabilize conditions and the broad spirit of co-operation developed has made possible the complete absorption of the new production with very little weakening of the technical position.

It is regretted that the uncertain conditions prevailing in the

United States board market have made it impossible to reduce the imports of board into Canada. Every effort is being made to reduce the volume of importations and to make certain that all importations of board are properly appraised and are not undervalued.

It is expected that the increase in consumption of boards will continue, and this increase helped by the present strength of the Section justified a hope that the Board industry in 1930 will show better results than it has for some years past.

Mechanical Pulp Section

In the course of his report for the Mechanical Pulp Section, A. Stewart McNichols said in part:

The market for the sale of groundwood experienced some slight improvement during 1929, which made itself felt in the latter part of the year due to dry weather interfering with grinding operations in the United States.

It is the first time in five years that the groundwood market has enjoyed (the word is quite apt) an active spot market and higher prices. Shipments of groundwood to the United States for eleven months, ending November 30th, 1929, amounted to 168,005 air dry tons against 148,933 a. d. tons for the corresponding period in 1928, showing an increase of 19,072 tons.

Shipments to the United Kingdom for eleven months show a falling off of 13,515 tons, compared with the same period last year; on the other hand, 2,996 tons were exported to France and 2,704 tons elsewhere, though no shipments were made to these countries in 1928.

Scandinavian producers are still laboring under the ill effects of overcapacity in production, and it is only recently that they have been able to curtail actual over-production through the organization in 1929 of a cartel composed of a majority of the Swedish, Norwegian and Finnish mills which have arranged to limit production to actual requirements.

Though the Scandinavian cartel's efforts have proved successful in arresting declining prices, they have not (at least in appearance) made use of their organization to raise the prices beyond the figure at which the better mills were selling. They are now offering freely to sign up contracts for groundwood at £6.10 for 1930, and at £6.15 for 1931 deliveries, c.i.f. English or French Coast ports. These prices, after deduction of ocean freight, stevedoring and other handling charges, would net the Canadian groundwood producer, on an average, approximately $20.18 and $21.27 respectively per short dry ton, at wharf at point of loading.

As the above figures are subject to further reduction for hauling from mill to wharf, and for the agent's commission on sales, it will be seen that the future affords very little encouragement for a resumption of exports to England and France.

Gambling With Fate

Too much stress cannot be laid on the oft repeated experience that manufacturers of a semi-finished product, having little or no home market, and who rely mostly on exports for the bulk of their sales (and groundwood producers belong to this class), must necessarily consider themselves as operating under very precarious conditions. No matter what extenuating circumstances may be invoked, they are gambling against experience and fate. Therefore, the best efforts of every groundwood producer should tend towards carrying his operations one stage further, or else towards some form of association, or other permanent arrangement, with the consumer of his product.

In the meantime, it may be well to keep in mind that the most effective manner of protecting the recently improved groundwood market is to keep it free from over-production: i.e. *stored pulp*.

Coated Paper Section

F. C. McElroy reported in part for the Coated Paper Section as follows:

The principal work done during the year has been the completing of certain changes in standards along the lines of simplifying the range of weights and sizes, and also standardizing various products throughout the industry in Canada. Considerable work has also been done to complete a better understanding of coated products amongst the merchants in order that a greater volume could be marketed through them to mutual advantage.

The question of importations of coated papers has been given considerable study during the year. While the Government statistics show a large increase over the preceding year, the actual situation is not as bad as the returns would seem to indicate. This year's statistics include some items which were not included in the figures given for last year. However, there is no doubt that the imports for 1929 have increased by a volume which would be very beneficial if placed in the Canadian coating mills.

In spite of this increase in imports, the industry records a slight increase in tonnage in both production and sales over 1928. This increase is encouraging since it shows that we are holding our own, but it is not in keeping with the growth of the country which should warrant an increase in our production of at least five per cent.

Wrapping Paper Section

Wrapping paper mills experienced a satisfactory year with good distribution and production well maintained at reasonable levels, according to the chairman of the section, F. J. Campbell.

Consumption of wrapping paper was at a higher rate than in the previous year. The harmonious relations between producers and distributors and the generally satisfactory state of the market were factors in the stable conditions that prevailed during the year.

Canadian exports of wrapping were somewhat smaller in 1929 than in the previous year, there being a decline in the shipments to England and South Africa which was only partly offset by an increase in shipments to Australia.

Production of the mills reporting to the Association in 1929 showed an increase of 15 per cent. over the 1928 figures for kraft, mill wrappers and miscellaneous wrappings.

Felt Section

W. Earle Walker, chairman of the Felt Section, reported as follows:

As forecast in last year's report, building throughout Canada continued very active, with the result that a larger amount of felt paper was used, showing a healthy increase over the year 1928.

In my opinion, Canada has only commenced her era of development and I look forward to a steady increase, year by year, of the use of tarred and especially asphalt roofings, which are now being produced in many color effects, which will lend themselves to any type of building.

Great improvement has been made during the last year or so in producing felt paper to specification as to saturation and tensile strength, etc., and these results can be obtained through mechanical process with cheaper raw material. The result of this means cheaper felt, cheaper and better roofing, and greater felt production at lower cost.

Waxed Paper Section

In presenting the report of the Waxed Paper Section, John R. Marshall, chairman, said:

The year 1929 has seen a further reduction in the number of Waxed Paper establishments, which is indicative of the limited amount of Waxed Paper used in this country with its small population and that predominantly rural.

The existing plants in our industry have equipment sufficient to take care of a population of at least twice our present population, with the result that business is highly competitive and prices naturally under such conditions are such as to permit only efficiently equipped and well managed plants to make a fair profit.

The consolidations and mergers in many branches of trade have had a great bearing on our industries. The number of buying units are becoming smaller and it is becoming more and more difficult to maintain an even balance or distribution of business. Any marked increase in our industry cannot be looked for until our

industrial population has vastly increased, thus creating a greater demand for our products.

Tissue Paper Section

George Chambers, chairman of the Tissue Paper Section, reported as follows:

Of the six paper mills which were manufacturing tissue in Canada at the beginning of last year, one was destroyed by fire, and, according to reports, is now being rebuilt, another has been converted for the manufacture of other lines. This leaves four tissue mills in actual operation in Canada at present.

The Canadian tissue production for 1929 was 4,276 as compared with 3,983 tons in 1928. The shipments for 1929 total 4,253 tons as compared with 3,958 tons for 1928.

As was noted last year, the importations into Canada both of flat tissue and paper for waxing are still considerable, the quantities so imported in 1929 being greater than in the previous year.

Throughout the year prices on a number of lines have been reduced, and competition has been keen, but the volume of business was fairly satisfactory.

The output of tissue paper specialties has been well maintained and the general outlook is promising.

Technical Section

R. A. McInnis reporting for the Technical Section, said in part:

The Technical Section is pleased to be able to report a year of marked progress. The membership list has had a healthy increase and now numbers 300 in good standing, a gain of 30 over last year. This has been achieved in spite of a rigorous application of the rules prescribing qualification for membership. It indicates that membership is becoming more and more to be recognized as a mark of distinction and a gauge of professional standing in the industry.

With the opening of the Institute last January, the Joint Committee and the Technical Section together devised a satisfactory plan of procedure, by which they could co-operate with the Institute through the Joint Committee. Committees were appointed to deal with Ground wood, Sulphite, Fine Papers, News print and Heat and Power, respectively. Meetings of these committees were held early in the year and a comprehensive program of problems built up which, after analysis by the Technical Section, was turned over to the Institute. The Institute now has those problems. They have been dissected by the Director and his staff and work has already been started on them. Results will, it is anticipated, be forthcoming in due course.

Last year our Section asked the Association for authority to employ a permanent secretary to carry on its work and an appropriation of $10,000 was granted for that purpose. For various reasons our Section deferred making an appointment, although still of the opinion that such an executive would be a most desirable acquisition, both to the Section and to the industry at large. We, therefore, request that the authority given last year and the grant of money accompanying it, be renewed.

Woodlands Section

The activities of the Woodlands Section continued to expand during the year 1929, according to the report of its chairman, R. H. Nisbet. Good progress was realized in a number of the research projects of more vital importance to the industry.

The membership of the Section has increased by 20 per cent, and this, with the increase in the degree of co-operation between the Section and its individual members, is such that now, as we enter upon our twelfth year of activity, the Section finds itself a well-united body of men representative of the industry, with a definite and constructive object, imbued with sufficient energy to ensure rapid progress.

On the other hand, it must be admitted that hitherto progress in forest management of pulpwood lands, and particularly in the technique of logging, has been comparatively slow. In contra-distinction, progress in the technique of manufacturing pulp and paper has been quite rapid, and has resulted in substantial savings to the industry. The latter progress has been achieved by research, carried out both by individual companies and by the Technical Section of this Association, both of whom have been fortunate in obtaining funds for such research.

It is perhaps not realized that the cost of wood represents approximately one-third of the total cost of finished paper; and our Section believes that the technique of logging and forest management is just as susceptible of improvement as has been the technique of manufacturing. Accordingly, the Section will ask for further funds to continue its work in this direction, and it is felt that we will eventually be able to indicate improvements in logging technique which will substantially reduce costs, and in methods for the management of pulpwood lands which will help to ensure more permanence in the supply of raw material. The Section will require a budget of $19,000 for the development and continuation of its activities in 1930.

General Committee on Education

George Carruthers presented, on behalf of the General Committee on Education, a report showing marked progress in the work providing technical education for mill workers, and adding:

With the assistance available both from Provincial Education Departments in the matter of tuition and the Institute in the matter of continuous correspondence and expert advice, it should be possible to maintain active and effective educational work in any of our mills.

We especially recommend that new employees be encouraged to take up this form of study. In one mill, it is made one of the conditions of employment for certain types of jobs.

We are of the opinion that this work is of sufficient importance to warrant close and organized attention of some definitely appointed agency in each mill.

Canadian Pulp & Paper Research Corp.

C. H. L. Jones, in the course of his report for the Canadian Pulp and Paper Research Corporation stated that all of the financial commitments in connection with the construction of the Pulp & Paper Research Institute have been met, the building itself completed, and that the sum of $7,520.53, representing the unexpended balance of the $50,000 appropriated at the last annual meeting, has been turned back into the Association Treasury in accordance with the terms under which the grant was made.

The total amount expended on Building and Equipment by the Corporation was $287,760.76, this being exclusive of the $100,000 allotted to McGill University as an endowment to be applied to the upkeep of the Building.

Interest charges on the outstanding bonds, including bank charges, amounting to $19,448.62, have been met during the year, while bonds to the amount of $17,500 have been redeemed for the Sinking Fund. Through the generosity of the Canadian International Paper Company, Limited, and the Bathurst Power & Paper Company, Limited, the Corporation was enabled to save $1,400 in principal and interest in the purchase of these bonds and is pleased to take advantage of this opportunity to place upon record its gratitude to those companies for their assistance. The value of bonds now outstanding amounts to $315,000.

Joint Administrative Committee of the Pulp and Paper Research Institute

F. A. Sabbaton, in a comprehensive report for the above committee, said:

We wish to record the optimism of the committee members, representing each of the three co-operating parties, in the eventual ability of the organization in charge of the Research Institute to produce results that will be of material benefit to the Pulp and Paper Industry. In order however, that these results may be forthcoming, it must be borne in mind that the Institute should have not only the continued financial support of the Industry but the whole-hearted co-operation of the Executives of the contributing Companies. During the past year, which has been largely devoted, as previously explained, to perfecting the process

of organization, it has become quite evident to the Committee that additional financial support for the work is required, and for that reason we recommend that authority be given to your Committee to incur obligations to the extent of $20,000 a year, if and as such expenditure in their opinion becomes necessary and expedient. The $20,000 is inclusive of the $10,000 asked for last year and allotted but not drawn upon.

Results of Research Work

Summarizing the work of the Institute for the past year, Dr. Harold Hibbert added the following:

1. Results of considerable value in enabling a better control of conditions existing in the manufacture of sulphite pulp have been definitely established by determinations of the pressure-temperature diagram for sulphur dioxide. It has been found possible to develop a general theory of the nature of the reactions taking place during the process and to show that certain features call for special attention:
   (a) The recognized temperature limit of around 120° is one apparently in which important chemical changes take place, the true explanation of which should shortly be available.
   (b) It has been shown that products closely related to lignin sulphonic acids are very strong acids.
   (c) These strong acids, as well as the cooking liquor itself, are able to bring about marked decomposition and degradation of the pulp.
2. The quantitative estimation of pentosans in pulp has been carefully studied and reported upon.
3. A short study has been made of a comparison between alpha cellulose determinations developed by Dr. Ross and the method suggested by the Standardization Committee of the A. C. S.
4. A large number of investigations have been carried out on synthetic products having a bearing on the structure of cellulose.
5. The nature and structure of soda cellulose have been established.
6. Important investigations have been carried out in the Departments of Physical Chemistry and Botany respectively on Penetration of Liquids into Fibres, especially wood. These are found to have an important bearing on the question of sinkage losses, pulping processes, etc.

PROPOSED PROGRAMME FOR 1930

It is intended to complete certain lines of investigations regarding the manufacture of sulphite pulp in connection with which further knowledge is desirable and necessary.

These embrace research work on:

(a) The reactions involved between alkaline bisulphites and both unsaturated aldehydes and lignin.
(b) The construction of an apparatus which will permit of electrical control of the sulphite cooking process on the lines of the work developed by Messrs. Hoover, Hunten and Sankey.
(c) The properties of lignin sulphonic acid.
(d) The structure of lignin, more especially its relation to oxidizing, reducing and nitrating agents, acids and alkalies.
(e) A study of the action of hypochlorites on lignin in order to compare the results with those of Taylor on hypochlorous acid and to develop a new method of bleaching.
(f) Methods for control of the reactions in the sulphite digester in relation to ultimate strength and other physical properties of the resulting pulp.
(g) The state of aggregation of cellulose in order to provide the fundamental data for investigation of (f).
(h) Application of the results already obtained on the constitution of soda cellulose to the phenomena taking place in sizing paper.
(i) Continuation of the work on the nature of the resins in Jack pine as applied to *old* Jack pine and to the nature of the pitch deposited on the wires and presses in the manufacturing process. Experimental work with a view to prevention of pitch trouble.
(j) Additional investigations relating to the structure of cellulose and soda cellulose.
(k) The possibility of synthesizing cellulose and related products by the action of bacteria and enzymes. Considerable progress has already been made in this research.

Division of Pulp and Paper Forest Products Laboratories of Canada

E. Parke Cameron, director of the Division reported that as a result of the year's work 13 articles on research had been prepared for distribution to members of the Association. He continued:

Throughout the period of building construction and machine installation, no attempt was made to build up the operating staff of the Division. Emerging from this condition throughout the year just passed, the business of assembling a competent operating staff was undertaken as a problem of primary importance. Entering the year with a Technical Staff of six men, we have at the present time a staff of thirteen, with six additional appointments to be made early in 1930. This technical staff together with the office and mechanical staff make a total complement of some twenty-nine staff members for 1930.

The largest undertaking and certainly the most difficult in some ways has been the completion of the experimental mill. At this time the mill is in complete operation save the digester room, which has been delayed through technicalities outside of our immediate control. It is contemplated that this unit will be in operation prior to the annual meeting.

The Sectional Meetings

Starting on Monday, and continuing until the annual general meeting on Friday, meetings of the various Sections of the Association were held, and at these many valuable papers and addresses on technical subjects connected with every aspect of the industry were presented.

At the Technical Section's meeting, there was an informative discussion on the topic of "Control of grinder operation in the manufacture of ground wood," which touched on grinder temperature and consistency, stone surface and burrs, speed, pressure, power input, grinding area and the make of stone. The discussion was under the direction of D. L. McLeod, chairman of the committee on mechanical pulp, while those who spoke included B. C. Brown, International Paper Company, Geo. Balko, Canada Power and Paper Corporation, A. E. Parrett, Ste. Anne Paper Company, F. H. Andrews, Canada Power and Paper Corporation, and L. E. Kendall, Abitibi Power and Paper Company, Ltd.

"Rule of Thumb" in News Print Industry

Royal S. Kellogg, secretary of the Newsprint Bureau, New York, gave an address dealing with the scope and opportunities for scientific control and economies in the items that figure most largely in the cost of news print paper production.

"For 1,800 years paper making has been an art and news print paper, at least, is still largely made by rule of thumb," said Mr. Kellogg. "We get certain results, but why this is so we don't know. If the industry is to progress, it must be put upon a scientific basis from tree to printing press. The fact that a certain thing has been done in the same way for 100 years by no means denotes that this is either the only or the best way to do it. It may be only an evidence of laziness and ignorance. Observation of practically all North American mills convinces me that much news print is still made in 'any old way.' An authority tells me that of 140,000 men in the North American paper industry, not more than 3,000 are making any effective effort to improve themselves. There is much yet to be done in the field of human engineering. However, we do have leaders who understand that progress is not only inevitable but desirable and from them we look for further advances."

Mr. Kellogg added: "The recent less profitable times for news

print have forced demands for economies and efficiencies that might otherwise have been long delayed. The technical man who can make good now has a better chance than ever before. Moreover, he is young enough to outlive many of the old-timers who scorn technical methods. He is the one who may transform papermaking from an art to a science, and his reward will come in the extent that he is qualified to take advantage of the opportunities on every hand."

National Railways Will Cooperate

Sir Henry Thornton, president of the Canadian National Railways, in an address at the annual luncheon of the Woodlands Section, said Canada's natural resources were three-fold; in the first place the actual soil which bears fruit in the crop production; in the second place the mineral treasures and vast resources underground; and in the third place the forest provided by bountiful providence. The forests unhappily are the resources that are fast dwindling, and the problem of maintaining their productiveness is a most important issue that Canada has to face. Scientific study and research is badly needed and the C. N. R. is staunchly at the back of all moves in this direction. The railway itself has done everything in its power toward the reduction of fires and timber waste of every sort, and from selfish and protective reasons has a vital and continued interest in the question.

News Print Service Bureau Meets

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 31, 1930.—The annual meeting of the News Print Service Bureau was held here today in the Ritz Carlton Hotel, and was well attended. The following officers were elected for the coming year: President, J. A. Bothwell, of the Brompton Pulp and Paper Company, East Angus, Que.; Vice-President, A. E. McMaster, Powell River Company, Ltd., Vancouver, B. C.; Executive committee, chairman, J. L. Apedaile, Price Bros., Ltd., Que.; A. R. Graustein, International Paper Company, New York, and W. H. Smith, Abitibi Power and Paper Company, Toronto, Ont.; Secretary-treasurer, Royal S. Kellogg, 342 Madison avenue, New York.

Irwin Paper Co. Elects Officers

[FROM OUR REGULAR CORRESPONDENT]

QUINCY, Ill., January 27, 1930.—The Irwin Paper Company has elected the following directors for the ensuing year: Leaton Irwin, Mac Irwin, H. G. Oelklaus, A. Wittler, E. A. Damhorst.

Officers for the year are as follows, Leaton Irwin, president; Mac Irwin, executive vice president; E. A. Damhorst, vice-president in charge of sales; H. G. Oelklans, treasurer; E. A. Michael, assistant treasurer; A. B. Grubb, secretary; W. W. Enlow, assistant secretary.

The company has purchased the good will and assets of The Galesburg Paper House, and will operate it, and The Springfield Paper House, as branches. The company is also interested in The Decatur Paper House, which is a separate corporation.

Paper Mill Employment

There was a decrease in paper and pulp mill and paper box plants in both employment and payroll in December compared with November according to the Bureau of Labor Statistics.

Two hundred and three paper and pulp mills reported their November employment at 57,933 decreasing in December to 57,659, a decrease of 0.5 per cent. The payrolls in these identical mills also decreased from $1,599,319 in November to $1,596,921 in December, a decrease of 0.2 per cent.

Reports were also received by the Bureau from 177 paper box factories which gave their November employment at 20,498 decreasing in December to 19,673, a decrease of 4 per cent. The payrolls in these factories also decreased from $476,238 in November to $452,039 in December, a decrease of 5.1 per cent.

Boston Paper Market Irregular

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., February 3, 1930.—A moderate amount of business was transacted by Boston paper houses as a whole during the last week, although statements from merchants vary. Some fine paper dealers say that the volume of their sales has been less than fair, while others say they have been very busy and have had the best week of the year so far. In most cases it is conceded that demand was greater during the first half of January than the last half.

Some of the New England mills are at present operating only three days a week, a fact which possibly indicates the volume of business from their selling agents. Reports from the coarse paper market are also somewhat varied. To some dealers the situation is apparently better than that of last year and very satisfactory. Others are not so cheerful, although hopeful. There is still said to be an over-production of No. 2 kraft which was recently marked down in price. Naturally the situation affects profits in this grade.

Box board dealers say the market is slightly better, but intimate that there is still much room for improvement. Values, while they have not declined, are decidedly unsatisfactory. The situation in the paper stock market does not show much change from the dullness of the last few weeks. Prices generally continue at the same levels, although in new domestic rags mills are paying .08½ for white shirt cuttings No. 1 compared with previous rates of .09½ to .10, and .09¾ for soft unbleached shirt cuttings, compared with .10 to .10½.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C. February 5, 1930.—The Government Printing Office has received the following bids for 7,100 pounds of 26x34 132, white natural tint passport paper; R. P. Andrews Paper Company, at 27 cents per pound; Whiting Paper Company, 25 cents; and Whitaker Paper Company, 20 cents.

The Government Printing Office has received the following bids for 10,200 pounds of 28x34 102, pink sulphite bond paper; Whitaker Paper Company, at 8.8 cents per pound; Barton, Duer & Koch Paper Company, 8.9 cents; Old Dominion Paper Company, 7.99 cents; Aetna Paper Company, 8.25 cents; Import Paper Company, 8.5 cents; and Walker-Goulard Plehn Company, 8 cents.

The Printing Office has also reecived the following bids for 3,200 pounds of 24x36 320, H. F. red sulphite paper; Reese & Reese, Inc., at 10.85 cents per pound; Whitaker Paper Company, 11.83 cents; and Barton, Duer & Koch Paper Company, 9.55 cents.

Barton, Duer & Koch Paper Company has been awarded the contract for furnishing the Government Printing Office with 37,700 pounds (400,000 sheets) of 17x22, 50 per cent rag white bond paper at 12.42 cents per pound, bids for which were received on January 15.

The Carew Manufacturing Company will furnish 2,000 pounds (approximately 7,000 sheets) of 22½x28½, 280, 50 per cent rag salmon index single ply at 26.49 cents bids for which were received on January 10.

Cellophane Price Reduced

The Du Pont Cellophane Company has announced a substantial price reduction effective February 1, applying to both regular cellophane and moistureproof cellophane.

This is the eighth reduction since the domestic manufacture of cellophane was started five years ago.

It is made possible by the greatly increased use of cellophane in a wider variety of industries. The new moistureproof cellophane has helped materially in the growth of the company—an interesting development of importance has been in the cigar industry where practically all leading cigar manufacturers are marketing at least a portion of their output in this new type of protective wrap.

Whalen Pulp & Paper Mill Action Dismissed

Long Delayed Action to Set Aside Sale of Assets to Royal Securities Corp., Ltd., of Montreal, Que., Dismissed by Supreme Court of British Columbia—Plaintiff's Council Consents to Move, Due to Lack of Evidence to Proceed With Case

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., February 1, 1930.—According to word from Vancouver an action which sought to set aside the sale of the assets of the Whalen Pulp and Paper Mills, Ltd., for nearly $4,000,000 on October 25, 1925, to the Royal Securities Corporation, Ltd., of Montreal, has been dismissed in Supreme Court of British Columbia. The action was dismissed at the consent of the plaintiff's counsel, who said he had no evidence to go on with the case. James Whalen, of Port Arthur, one of the plaintiffs, died several months ago. The remaining plaintiffs were George F. Whalen, Vancouver, and Mrs. Verna Dangerfield, of New Westminster, who sued on behalf of themselves and other debenture holders of the Whalen Pulp and Paper Mills, Ltd. The plaintiffs estimated the holdings of the company in the neighborhood of $10,000,000 to $15,000,000, whereas the holdings were sold to meet first mortgage bonds on which $3,707,500 was in default. The defendants included the Montreal Trust Company, Royal Securities Corporation, British Columbia Pulp and Paper Company, Ltd., Vancouver; I. W. Killam, of Montreal, president of the Royal Securities Corporation, and the Whalen Pulp and Paper Mills. The assets of the Whalen company were sold to the Royal Securities Corporation under an order of the court. The British Columbia Pulp and Paper Company took over the undertakings and Mr. Killam was president. The Montreal Trust Company was trustee of the debentures.

Paper Company Strengthens Position

Recent advices received from Quebec say that the Quebec Pulp and Paper Corporation has, during the past few months, strengthened its position by the retirement of the funded debt of its subsidiary companies and now has outstanding only $7,000,000 of preferred stock and 100,000 shares of common, the latter being jointly owned by Price Bros. and Port Alfred Pulp and Paper Corporation, which in turn is controlled by Canada Power and Paper. In addition the company has made application to the provincial government to have the capital stock of Chicoutimi Freehold Estates, Ltd., reduced from $1,200,000 to $120,000. Operations of the company have been fairly successful this year, though the report covering the year ended December 31 last is not expected to show any material change from that of the preceding period. Mill No. 1 at Chicoutimi has been operating on a satisfactory basis, and though operations are curtailed at the moment, the last quarter of 1929 saw a good demand for the company's products, namely, ground wood pulp.

Abitibi Earns Dividend on Preferred

It has been learned around head office circles in Toronto that although it will be a month or so before the financial statement of Abitibi Power and Paper Company covering 1929 will be made public, there is pretty good ground for stating that this statement will prove a satisfactory one to the shareholders. Some elements of it will probably come as a pleasant surprise. The vice-president and managing director, L. R. Wilson, effectively set at rest a few days ago any doubt as to the maintenance of the dividend on the 6 per cent preferred stock. Apparently the decline in this stock to a point where it was showing a return of over nine per cent had been due to some anxiety as to whether the dividend was being earned and its continuance reasonably certain. Indeed a preliminary estimate, it is understood, shows this dividend as earned between one and a half and two times during 1929. This would indicate somewhere around $10 or $11 a share on this stock, of which 348,818 shares are outstanding, an amount equivalent to between $3,500,000 and $3,800,000. As the common stock comes after this it follows that a very substantial sum will be shown as available for the junior security. The 1929 statement, it is said, will show a considerable increase in earnings over the previous year and in addition will indicate a very strong working capital position.

Foresters' Club Holds Banquet

The fifteenth annual banquet of the Foresters' Club, Toronto, was held a few days ago, at which Dr. C. D. Howe, Dean of Forestry, University of Toronto, presided. Among the speakers was Professor Raphael Zon, who is a director of the Lake States Experimental Station and editor of the *Journal of American Society of Foresters*. His address was on "What is a Forest?" and in the course of it he described its struggle for existence and plant life. Forty years ago Professor Zon, a Russian immigrant, with nineteen cents in his pocket, arrived in the United States and made rapid progress in his chosen profession. Other speakers at the banquet were P. J. Coverhill, Chief Forester for British Columbia; Sir Robert Falconer, president University of Toronto, and J. B. Bickersdike, warden of Hart House. Many problems concerning the pulp and paper industry, in addition to forestry, were discussed at the gathering.

Notes and Jottings of the Trade

During the month of January, A. L. Smith, provincial sanitary inspector, whose headquarters are at Fort William, working under the auspices of the Ontario Pulp and Paper Makers' Safety Association, of which A. P. Costigane is secretary-engineer, examined the following First Aid mill teams: Kenora Paper Mills; Fort William Paper Mills, Fort William; Great Lakes Paper Mills, Fort William; Thunder Bay Paper Company, Port Arthur; Provincial Paper Mills, Port Arthur; Spruce Falls Power and Paper Company, Kapuskasing; Lincoln Pulp and Paper Mills, Merritton; Howard Smith Paper Mills, Ltd., Cornwall; E. Pullan, Ltd., Toronto.

A survey of 1929-1930 pulpwood operations in Ontario discloses that paper companies are operating approximately 109 camps in which they are employing about 8,000 men. There are also approximately forty pulpwood contractors cutting on leased or personally owned limits. They operate about 100 camps, employing in the neighborhood of 3,500 men.

C. Ernest French, of the Toronto office of the Howard Smith Paper Mills, had an honor conferred upon him a few days ago when he was elected a director of the Toronto Flying Club. "Ernie" is an enthusiastic flier and last summer did a lot of good work with the local birdmen. He anticipates doing considerable flying during the coming summer months.

An interesting visitor to Ontario recently was the Hon. Peter Cashin, Minister of Finance and Customs in the Newfoundland Government. He stated that the Hearst interests desire to establish a pulp and paper mill in Newfoundland and that he was on his way to New York in connection with the matter. He expressed considerable optimism over the prospective negotiations.

Recent advices from Hiltonbeach, Manitoulin Island, Ont., state that it looks as though the two saw mills of that place are going to have a busy spring. There will also be a large quantity of pulpwood and other timber to ship out.

A steam turbine which exploded in the St. Francois Mill of the Canada Paper Company at Windsor Mills caused damages to the interior of the mill and to valuable paper making machinery, be-

sides totally disrupting the local electric power supply. Total damage is estimated at several thousand dollars.

L. A. Nix, woodlands manager of the Bathurst Power and Paper Company, recently delivered an interesting address to the members of the Forestry School, University of New Brunswick, in which he outlined the methods used by a modern pulp and paper company in planning its woods operations from the intensive timber survey to the giving out of contracts. He explained the systems of collecting and compiling costs of the different operations and of supervising the work of logging contractors, as used by his company.

H. F. Brunton, Toronto representative of the Canadian International Paper Company, has transferred his office from 1026 Federal Building to 612 Rushton road, Toronto.

To assist in the solution of forestry problems, the Forest Service of the Department of the Interior is carrying on research work on the national forests in the western provinces of the Dominion, and has established forest experiment stations at Chalk River, Ont., and Lake Edward, Que. Experimental areas have also been established in New Brunswick and research work is being conducted in Nova Scotia which is specially designed to assist settlers in the profitable management of their wood lots.

Recent advices from Espanola, Ont., say that the families of 300 employees of the Espanola news print plant of the Abitibi Power and Paper Company are being cared for, and have been protected since January 1, when the mills were closed down by the firm. Food and fuel are being provided by the company to those who require it and no employee is being charged rent during the long lay-off.

A large amount of pulpwood is piled on the ice along the shores of Little Dog Lake by the settlers in the district of Kiministiquia, Ont. The settlers have quite a problem this year as the ice on the lake is not strong enough to support the weight of the wood. Large quantities of wood are gradually submerging as the piles grow, making the task of measuring very difficult.

Pacific Paper & Products Co. Formed

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., January 31, 1930.—Joseph H. Koke of the Koke-Chapman Printing Company, Eugene, Ore., is president of a new concern which is filing articles of incorporation immediately as the Pacific Paper and Products Company. Construction will start in February on a $500,000 plant at Eugene.

P. J. Lamoureux, recently with the Oregon Pulp & Paper company, Salem, is vice-president and will be active manager of the mill. The secretary is E. O. Immel, and the treasurer A. A. Rogers, president of the First National Bank of Eugene. George J. Wilhelm is also vice-president, and other directors include Dr. W. H. Dale, Roy W. Stien, Albert W. Stien, Frank X. Schaefers and James W. Seavey.

J. E. Smith, vice-president and manager of the Sterling Founders' Corporation of Portland, will act as fiscal agent of the firm and will maintain offices in Eugene.

Consideration of this project has been engaging its sponsors for some time, but the power races and the freight problem due to lack of water transportation at the mill, held up the start of actual construction. However a favorable rate offered by the water board will offset the freight differential between Eugene and other Willamette valley towns with paper mills on the river. The mill will be adjacent to the tracks of the Southern Pacific.

The new plant will have a capacity of 10 or 12 tons a day. The owners plan to develop a specialized market and the plant will manufacture any one of six common grades of paper for which there is the largest demand on the coast. The pulp timber in Lane county near the mill was an attraction and the promoters are negotiating with railroad companies for special commodity rates on the pulp to be transported to the plant and for the paper to be shipped out.

News of the Boston Paper Trade

BOSTON, Mass., February 3, 1930.—It is reported that the main office of Carter Rice & Co. Corp., Boston, and the branch offices at Portland, Ore., San Francisco, and Seattle, are doing a prosperous business. All exceeded the quota for 1929. The Portland branch, which went over the quota substantially, won the inter-divisional cup. This cup has been suitably engraved. The Portland branch is laying plans for a new warehouse to be occupied some time this year. The next in the series of special meetings of the Carter Rice & Co. Corp. is to be held February 15. Durant F. Ladd, of Tolman Print, Inc., Cambridge, Mass., is to discuss advertising layout, preparation for direct mail campaigns and where paper fits into the "picture."

The Hon. Hobert Parker, chairman of the Tercentenary Committee, and former attorney general, is to speak at the annual meeting of the Boston Paper Trade Association, to be held at the Algonquin Club, March 19.

Wm. J. McLellan, purchasing agent of Carter Rice & Co. Corp., has been appointed chairman of the Paper Division of the New England Purchasing Agents for 1930. Chairmen chosen for coming meetings are as follows: February, Homer Griffin, Dennison Manufacturing Company; March, Frank B. Cummings, Hollingsworth & Whitney Company; April, Arthur Holbrook, English China Clay Sales Corporation; May, Arthur V. Howland, Tileston & Hollingsworth Company; June, Walter Evans, Nashua Gummed and Coated Paper Company; July, M. B. Freeman, Dennison Manufacturing Company; August, Harold Holden, Vera Chemical Company; September, Frank Wyman, Falulah Paper Company; October, C. B. Wells, Ginn & Co.; November, E. B. Dik, George W. Wheelwright Paper Company; December, Arthur Burdett. Meetings are held at the Boston City Club, except from May to September when members gather for outings at golf clubs. Walter Evans is chairman of the golf committee.

At a meeting of the junior sales group of Storrs & Bement Company, Friday evening, moving pictures of the manufacture of paper by the S. D. Warren Company, of Cumberland Mills and Gardiner, Me., were shown. John H. Brewer, general manager of the Storrs & Bement Company, presided. About 25 were present.

The former Stone & Andrew warehouse at 64 Pearl street has been closed and all the business continued by John Carter & Co., Inc., at their Atlantic avenue warehouse. It will be remembered that Stone & Andrews, Inc., have been absorbed by John Carter & Co., Inc.

John Carter & Co., Inc., and Cook Vivian Company are to distribute in the Boston territory the new line of Persian Oriental, made by the Carew Manufacturing Company, South Hadley Falls, Mass.

Hubert L. Carter, president of Carter Rice & Co. Corp., and a director of Carter Rice & Carpenter Paper Company, Denver, Col., has gone to Denver, expecting to remain there about two weeks.

G. P. Rothwell, of the sales promotion department of the Hammermill Paper Company, Erie, Pa., has been calling on the Boston trade in connection with the Hammermill Cover.

W. G. Thomas, of the Lafayette Box Board and Paper Company, Lafayette, Inc., Arthur Schroeder, manager of sales at the New York office of the Pejepscot Paper Company, of Brunswick and Lisbon Falls, Me., and C. O. Brown, of the Downingtown Paper Company, of Downingtown, Pa., called on the trade last week.

The old Thornton-Douglas clothing factory at the corner of Mary and Cannon streets in Hamilton, Ont., has been acquired by the National Paper Goods Company, Queen street North, Hamilton, for about $45,000. It is understood that in the near future extensions are to be made to the building. C. B. Martin is vice-president of the National Paper Goods Company.

Bright Outlook for Wisconsin Paper Industry

Normal Conditions Anticipated for Current Year by Most Paper Manufacturers In Fox River Valley Section—Satisfactory Volume of Orders Being Received for 1930 Operation—Prices Should Be Maintained as No Over-Production Is Expected

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., February 3, 1930.—Orders are coming in satisfactorily in most mills for 1930 operation and nothing short of normal conditions is expected by most paper manufacturers in this section. The outlook generally is quite encouraging.

One expression comes from William C. Wing, president of the Fox River Paper Company, the largest company at Appleton, Wis. The mill is operating at normal capacity and orders are just as heavy as they were in January a year ago. Mr. Wing intimated that further modernizing and improving of the two mills of the Fox River Company would be undertaken this year.

An increase in business is anticipated by the Tuttle Press Company, Appleton, Wis., operating a large converting plant. The 1930 volume is expected to exceed that of 1929, according to R. H. Purdy, general manager. The plant is running a little above normal now, and the orders booked thus far are ahead of last year.

Manufacturers are hoping that there will not be an over production and a consequent price cutting to move stocks. Conditions that are anywhere near normal will prevent this situation, it is believed.

The close of the first year of operation at the Badger Paper Mills, Inc., Peshtigo, Wis., indicates that this company is meeting with good success. The mill was started on February 1, 1929, after it had been purchased at auction by the present corporation and reports at the annual meeting showed that glassine and other specialties are now being produced at a profit. Two-hundred employees are on the pay roll, and the company has a nice volume of advance business booked.

Quarterly dividends on preferred stock will be discontinued by the Thilmany Pulp and Paper Company, Kaukauna, Wis., according to a decision of the stockholders at the annual meeting last week. Hereafter the board of directors will be empowered to authorize dividends as they deem best, and the articles of incorporation have been changed accordingly. The company is incorporated for $1,000,000 worth of preferred stock and has been paying an annual dividend of 7 per cent.

Classes for Paper Mill Employees

Instruction concerning the raw materials used in the manufacture of paper will be given a class now being organized in the vocational school at Menasha, Wis. Quite a number of paper mill employees are already enrolled. The class will run for ten weeks and A. W. Bouffard, instructor in paper and pulp subjects, will be in charge. Later instruction will be given in paper testing. Similar classes will be organized in the Wisconsin River Valley, and at Rhinelander and Eau Claire, Wis. These will be taught by Louis J. McNamara, who was formerly employed by the Kimberly-Clark Corporation.

Safety School Lectures

Judge Matthew McCarthy, of Rumford, Me., is giving a series of safety lectures in the Fox River Valley. He is scheduled to speak before various safety groups and foremen's schools which are meeting regularly. The speaker at the last meeting of the safety school at Green Bay, Wis., was Samuel H. Reid, of the Bureau of Safety, Inc., Chicago. P. J. Timmerman, mill manager of the Northern Paper Mills, and a former president of the National Safety Council, acted as chairman.

News of the Trade

Financing of an addition to the Parish School of Holy Name Catholic Church, of Kimberly, Wis., has been offered by the Kimberly-Clark Corporation, whose mill is located there. The church has a $40,000 debt which it is hoping to retire, and an annual gift is promised by the paper company if the members of the parish will pay off the old obligation. The residents of the village are all employees of the mill.

The second fire loss within a year was occasioned the Fox River Paper Company, Appleton, Wis., last week. Fire started in the housing around steam pipes under the floor of one of the buildings and was difficult to extinguish because the structure is built above a tail race. Stock was piled near the place where firemen worked, and it is estimated the loss was $1,000.

H. G. Noyes, director of paper mill instruction for the Wisconsin Vocational School Board, will appear on the program of the Technical Association of the Pulp and Paper Industry at the annual convention in New York City, February 18. He will report on the extensive work accomplished in Wisconsin to train foremen and employees.

J. Kindleberger to Visit Holy Land

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., February 4, 1930.—Visiting the Holy Land, a trip that he has desired for 40 years, will be consummated this winter by Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company. Leaving Kalamazoo Monday, accompanied by Mrs. Kindleberger, he goes for a three months leave of absence and a good rest. This privilege was extended him by the board of directors.

Mr. and Mrs. Kindleberger will visit the Mediterranean countries outward bound, devoting special attention to Palestine. Saturday morning Mr. Kindleberger received by mail an invitation to speak in the American church in Jerusalem. He considers that a distinct honor and privilege.

On the return trip home, their travels will take them to Italy, France, Holland, England and Scotland. He intends to visit the hand made paper mills in Italy, also the paper mills in England and Scotland. They will return home about May 1.

Mr. Kindleberger was born in Germany and made a return trip to that country in 1922, studying the paper mills there in preparation to the construction of the new K.V.P. mill.

Slight Increase in Indianapolis

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., February 3, 1930.—A very slight increase in demand is seen here for most grades of paper. The increase is not nearly what the trade expected and there in considerable disappointment regarding business conditions. There is not nearly the contract business on file there should be. In spite of these facts, prices seem firm with no indication on either the mills or the jobbers of cutting profits in order to make sales. In some specialties, particularly glassines, where competition is very severe, there is an indication toward unsettled conditions. Concessions have been made in prices to secure business.

Some demand is seen for writing papers and some increase is noted in the volume of inquiries being received for fine papers. This is about the only encouraging note in the local market. Demand for wrapping papers is only ordinary and there is a considerable fight for business in this territory. The larger stores have not recovered from the post-holiday slump and the demand for this grade of paper has not recovered to any great extent.

Chicago Paper Market in Transitory Position

Stocks Reported Low and Conditions for Healthy Upswing Is Said To Be Exceptionally Promising—Kraft Price Cut Brought About by Over-Production — Demand for News Print Paper Continues Satisfactory—Book and Cover Papers Unchanged

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., February 3, 1930.—Conditions in the Chicago paper market are reported in more or less of a transitory position between completion of inventories and the beginning of the spring business demand. Stocks in most cases are reported low and conditions for a healthy upswing in this market, at least, are said to be exceptionally good. Right now the attention of the market centers somewhat on the kraft situation which needs no further comment here. Jobbers and sales representatives of other lines are not afraid of any serious results because of the kraft cut believing that the situation was brought to a head by the tremendous over-production reported in the industry itself.

Representatives of news print mills feel that the market will maintain a fairly stable business for some time now. Production in news print mills is running at normal capacity and the demand is continuing satisfactorily. The fine paper business has slumped slightly, according to reports from jobbers of these lines. Books and covers remain little changed. The board market could, and probably will improve with an increased spring demand.

George K. Gibson Discusses Kraft Situation

The Chicago Paper Association held one of its most successful meetings on January 28 at the Bismarck Hotel. An unusually large attendance turned out to hear two discussions of interest to members. Mr. O'Keefe, of the Chicago Association of Credit Men, addressed the association along the lines of credits, stressing the need of a better and closer organization in order to accomplish a constructive program. Mr. O'Keefe submitted a plan for a credit interchange bureau to be conducted by the Chicago Association of Credit Men and to bring the Chicago Paper Association definitely into the program. Mr. O'Keefe's plan is now being considered by the association executive board.

George K. Gibson, sales manager of the Mosinee Paper Mills, also appeared on the program and directed his remarks to the present condition in the kraft industry. Mr. Gibson, always a keen student of the paper industry in general, and of the kraft business in particular, outlined the causes of the present cut in kraft prices, pointed out some of the conditions that might result, and offered his ideas of some helpful remedies. While Mr. Gibson is a thorough student of these problems he is also a forceful speaker. His remarks relative to the kraft situation were unusually interesting and effective. Earl Beier, vice president in charge of the industrial division of the Chicago Paper Association, was in charge of the meeting.

News of the Trade

The Allied Paper Mills, of Kalamazoo, Mich., through their Chicago representatives, are featuring Allied "Velour," a folding coated paper characterized as being exceptionally well fitted because of its printing and folding qualities and for its strength. The direct mail piece carrying this story is a feature piece of work. The cover, with the words "Velour—a new value in Folding Coated Paper" are stenciled out and shown up by means of red and black colors on the third page of the folder. It is a splendid and effective means of putting the message over.

Ed Kennedy, formerly with the Great Western Paper Company, became associated with the Mead Sales Company on February 1. Mr. Kennedy will be identified with the sales and service department of the Mead organization and, for the time being at least, will work out of the Chicago offices at 111 West Washington street. Mr. Kennedy was connected with the Great Western Paper Company for a period of twenty-one years, part of the time at the mill and, for the past three years, as sales manager of this territory, with offices in Chicago. With the discontinuing of the Chicago office of Great Western, Mr. Kennedy became associated with the Mead organization. He is very well known in Chicago and Middle Western paper trade circles.

Jim Coy, of the executive board of the Salesmen's Association of the Paper Industry, is one of the busiest men in Chicago right now. And all of it is not business, even though Jim does get his share. He is charged with the grave responsibility of rustling together enough Chicago salesmen to fill up a special car or two—or three—for the trip to the meeting at the Hotel Pennsylvania New York, on February 17. The luncheon meeting at the hotel is the big national event of the Salesmen's association year. It won't be Mr. Coy's fault if the entire Chicago division isn't riding the New York Central rails in a couple of weeks.

The temptations of Florida and Cuba have drawn George K. Gibson, of Mosinee, to that territory for a vacation that will extend until February 22.

W. P. McNulty, of the McNulty Paper and Twine Corporation, of Chicago, has been in Miami and Cuba for almost a month now. He's due back any day. The trip was made by automobile.

Louisville Paper Co. Entertains Editors

LOUISVILLE, Ky., February 3, 1930.—The members of the Kentucky Press Association during their annual mid winter meeting last month were guests of the Louisville Paper Company at a delightful banquet dinner and entertainment at the Pendennis Club. Over one hundred were in attendance and the occasion was a very enjoyable one from every standpoint. The dining room was beautifully decorated with flowers and colored balloons and a most delightful menu was served.

Thomas Floyd Smith, president of the Louisville Paper Company, extended a welcome to the press folk in a very happy and interesting manner, and the response was made by Editor Joe T. Lovett, of the Murray Ledger and Times. John Marshall, vice-president of the Louisville Paper Company, presided at the meeting and introduced those on the program.

The *Kentucky Press*, the official organ of the Association, says "The Louisville Paper Company and the Louisville *Courier-Journal* more than covered themselves with glory and the thanks of all in the excellent entertainment and the excellent 'eats' that were provided for the editors' 'bill-of-fare' on Friday evening and Saturday noon. Both occasions will long be remembered by those who were fortunate to be in attendance at these banquets, and we voice the sentiments of the editors of the state when we say a hearty 'thank you' to these two organizations."

Eugene Lansing Seriously Injured

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., February 1, 1930.—Eugene Lansing, formerly superintendent of the A. P. W. Paper Company, was seriously injured in a grade crossing accident during the past week when the car he was driving was struck by a train. He is now confined to the hospital with injuries to his head, a fractured arm and two fractured ribs. Mr. Lansing is now employed by the Noble & Wood Company and is the inventor of a felt washing appliance.

Demand for Paper is Listless in Philadelphia

Small Lot Purchasing Prevails In Fine Paper Market With Prices Steady and Practically Unchanged—Writing Paper and Unfinished Book Papers Continue to Hold Attention—Break In Price of Kraft Paper Retards Wrapping Paper Market

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., February 3, 1930.—Following the usual course of month-end trading, the Philadelphia paper market was listless and indicated the tendency of customers to hold off purchases until the coming month when there is anticipated a much livelier demand. Among the fine paper dealers trading dragged along in the small lot buying that prevailed. There were no offerings of consequence to disturb prices although competition is keen. Writing papers, unfinished book papers, and those grades that were active throughout the month, continued to hold attention.

The recent break in the price of kraft has retarded the wrapping paper market. Other grades of papers are steady, with no new price revisions of consequence. Paper stock continues listless and much demoralized in prices as the trade lingers along hoping that February will witness a turn to a buyers market. Cheaper grades are selling far below their values and many of the wholesalers of waste paper are curtailing buying in an effort to steady the market.

Paper and Cordage Committees Appointed

President George K. Hooper, of the Paper and Cordage Association of Philadelphia, announced the appointment of the following officers who will serve in various capacities throughout the coming year. Harold E. Newell, American Manufacturing Company, Membership Committee chairman; Entertainment Committee, John G. Birle, Jr., American Forest Products Company, chairman; William C. Mansfield, Union Bag and Paper Corporation, Publicity Committee; E. L. Richards, Buffalo Envelope Company, chairman, Credit Bureau. The following were assigned to the directorate of the association:—Frederic S. Balch, Schuylkill Paper Company; Harold E. Newell; Frederick I. Brower, Groveton Paper Company; John G. Birle, Jr.; William V. Edkins, Morice Jute Mills; E. L. Richards, and the president of the organization, George K. Hooper. There appointments were officially acted upon at the meeting of the association held on Friday when a dinner was given at the Adelphia Hotel at which the members were informed of plans to hold an annual banquet. John G. Bierle, Jr., who has been appointed chairman of the entertainment committee, announced that the annual banquet will be staged at the Pennsylvania Hotel, 39th and Chestnut streets, on February 22.

Century Old Paper Firms Dined

Century old firms which have been in the family of the founders through the years were the guests of the Philadelphia Chamber of Commerce. There were represented among the oldest of United States manufacturing enterprises who participated in the banquet held at the Bellevue Stratford Hotel last Wednesday three paper making concerns and one allied consumer which started as a distributor of paper and converted products. The paper manufacturing concerns were the McDowell Paper Mills, of Manayunk, dating back to 1825; Shryock Brothers, paper board manufacturers, of Downintgon, Pa., established in 1790; the J. Gibson McIlvaine Company, lumber distributors and manufacturers, and owners of the Downingtown Paper Company, the latter concern not yet established 100 years, but the former parent company dating back to Colonial days and founded in 1798. These firms were represented by Charles McDowell; S. S. Shryock, Jr.; his brother and associate, Owen Shryock; and J. Gibson McIlvaine, president of the J. Gibson McIlvaine Lumber Company.

Superintendents to Convene Here

Philadelphia was selected for the annual convention of the American Pulp and Paper Mill Superintendents Association by the convention committee which met here last Friday. The convention will be held from May 29 to 31 at the Benjamin Franklin Hotel. The meeting will include the annual assembly of divisions of the mill superintendents organization from all parts of the nation. The convention committee which met here last week consisted of the following members;— J. Bertwell White, chairman, National Vulcanite Fibre Company, Yorklyn, Del.; J. E. Blosser, International Paper Company, New York; J. Garfield Ramsey, Joseph Plumstead, J. Mullin, of the Jessup and Moore Mills, Wilmington, Del.; Frank E. Winslow, General Electric Company, Paper Mill Equipment Division, Philadelphia,; Joseph Dow, Eastwood Wire Company, Newark, N. J.; H. J. Joachim, Paper Container Corporation of America, Philadelphia Mills; Robert Knowles, Reading Paper Mills, Reading, Pa. and G. Ireland, Crane Company, Chicago and New York: J. B. White, of the Yorklyn, Del., mills of the National Vulcanite Fibre Company was appointed chairman, to select a committee to arrange the program for the coming convention.

Mrs. Charles R. Hamilton Passes

Trade sympathies were extended to Charles R. Hamilton, president of Dreka & Co., 12th and Chestnut streets, importers of exclusive papers and stationery, upon the sudden passing of Mrs. Hamilton last week while on a visit to friends in Harrisburg, Pa. Mrs. Hamilton died shortly after her arrival at the home of her friends last Saturday. The remains were removed to Philadelphia for burial on Tuesday. Mrs. Hamilton was a prominent church worker affiliated with Holy Trinity Church on Rittenhouse Square, where funeral services were held. Surviving her, besides her husban, are her son, C. Ross Hamilton Jr., and a granddaughter, Florence Olga Hamilton.

Howard W. Taylor Recovers from Operation

Howard W. Taylor, president of W. C. Hamilton & Sons, Miquon, who was operated upon a few weeks ago for gall stones, while confined in the University of Pennsylvania Hospital, has fully recovered and is again at his desk.

Russian Engineers Visit Bagley & Sewall Plant

WATERTOWN, N. Y., February 1, 1930.—A delegation of paper mill engineers from Russia spent the past week in this city inspecting the plant of the Bagley & Sewall Company. The engineers were sent to this country to make a thorough study of the methods used in this country. The men were escorted through the plant by C. W. Valentine and Edward S. Lansing, president and vice-president, respectively, of the company.

It was learned that the engineers have already visited many of the largest paper mills where they collected much information for future use. The engineers would give out nothing decisive concerning orders for paper machines and paper mill equipment which are expected to be placed in the near future.

Portfolio of Certified Record Papers

An attractive portfolio of specimens has been issued by the L. L. Brown Paper Company of Adams, Mass., in connection with the new line of L. L. Brown's Certified Record Papers.

The portfolio is of letter head size, and exhibits ruled and printed specimens of the company's several grades of guaranteed record papers, and also includes appropriately selected samples of letter heads in its bond lines. Copies are available upon request.

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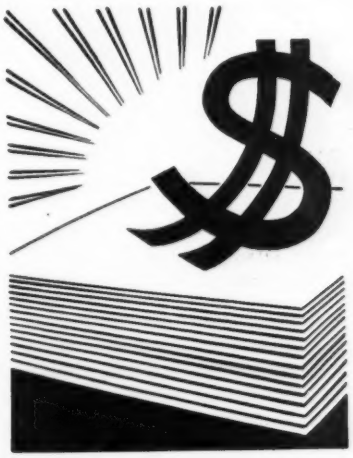

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Quebec Premier Reveals Agreement With I. P.

Taschereau Informs Paper Mill Workers That International Have Agreed to Operate Their Plants In Province at Full Capacity and Close Down Their U. S. Plants—States That Company Controls Only 20 Per Cent of News Print Supply In Canada

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., February 2, 1930.—Premier Taschereau revealed a hitherto unknown agreement between the Quebec Government and the International Paper Company, in reply to a deputation of news print workmen relative to unemployment in the industry. These workmen represented various mills situated on the St. Maurice River, and they complained of unemployment because of the fact that the mills of the Canadian International Paper Company are working 100 per cent of rated capacity, and even greater, while the mills in which they are employed work only 70 per cent of capacity.

Premier Taschereau told the delegation that the Government cannot control production in a mill, but as regards the matter at issue said that an understanding had been reached between the International Paper Company and the other mills, whereby the International would operate their mills in this province at full capacity, and in return would close down their mills in the United States. It was suggested to the Government that there should be prohibition of the export of pulpwood cut on private lands, but Mr. Taschereau pointed out this was a federal matter.

Apparently the above arrangement is one which was arrived at last week when Mr. Graustein had a conference with Premier Taschereau in Quebec City.

The Premier further told the delegation that the International Paper Company controls only 20 per cent of the news print supply in Canada, and if the other companies were able to understand each other it should not be long before the price of paper would go up.

He added that the Government was still endeavoring to induce the International Paper Company to terminate the agreement with the Hearst interests under which paper is to be sold for five years at $55 a ton.

Newsprint Institute of Canada

It is announced that John H. Price, president of Price Bros. & Co., is to be chairman of the board of the Newsprint Institute of Canada for the current year, in succession to C. R. Whitehead, who occupied the chair during the past year, the first year in which the Institute existed. This is the organization through which the pooling of tonnage is effected, and the announcement in connection with the chairmanship is construed as meaning that the mills represented in the Institute will continue for another year to distribute their orders so that each mill may receive its share in relation to its capacity.

Canadian Forestry Association

The 30th annual meeting of the Canadian Forestry Association was held in Montreal during the week. Through the reviews of Brig.-Gen. J. B. White, D.S.O., president, Robson Black, manager, and special addresses by Prof. Bernard K. Sandwell, F.R.S.C., special lecturer of the association, and Norman M. Ross, B.S.A., B.F., chief of the tree planting division, Indian Head, Saskatchewan, the note for conservation, the principle of reforestation, and the necessity for concentrated forest work were stressed. Incidentally Mr. Ross predicted that the near future would see startling developments in the whole aspect of the Prairie Provinces through the rapid growth of the tree-planting movement initiated by the Government. The spread of the movemnt, and the success of the experiment far exceeded expectations. Every year from 7,500,000 to 9,000,000 young trees were distributed for planting, and since 1901 over 100,000,000 broad leaf trees and 2,500,000 coniferous trees had been distributed.

During the year just closed, the Canadian Forestry Association has maintained its record of steady growth. The membership advanced by 2,000 to 32,008, and the revenue reached $161,000, an increase of $12,000 over 1928.

Nearly 80,000 miles were covered by the lecture parties of the association traveling in all provinces except Prince Edward Island, and no fewer than 1,875 public mass meetings were held, chiefly in the small communities of timbered country, with close to half a million people in attendance.

Powerful Vessel for Chicago Tribune

The latest departure in ship designing relative to the paper manufacturing business is the S.S. *Thorold,* which has been constructed for the *Chicago Tribune* on plans made by the firm of Lambert & German, naval architects, Montreal. Mr. Lambert, member of this firm, leaves shortly for England in order to be present at the trials of the *Thorold.* It has been especially built for newsprint carriage, and will be ready for delivery when the lake and river season of navigation opens.

Noteworthy among the features stressed by the designers will be the powerful Diesel engines, the third such to be used in the inland waters trade, and the most powerful of the three. Owing to the design this type will be able to carry in the neighborhood of one thousand tons more cargo than other canal sized vessels. The dimensions of the *Thorold* are: Length, 253 feet, breadth 43.6 feet, depth 23 feet.

Longview Fibre Co. Joins TAPPI

The most recent company to join the Technical Association of the Pulp and Paper Industry is the Longview Fibre Company, of Longview, Wash. This company manufactures 100 tons daily of sulphate test liner and 30 tons of sulphate wrapping paper as well as 120 tons of sulphate pulp.

The mill's equipment is of the most modern type and several innovations are evident including the Peebles evaporator and stationary sulphate recovery furnaces. Its major equipment consists of four digesters, one wet machine, ten 2000 pound beaters, eight jordans, one six cylinder, 133 inch paper machine and one 174 inch M. G. Yankee machine.

The officers of the company include: H. L. Woolenburg, president; D. C. Everest, vice pres.; C. J. Shoo, vice pres.; M. T. Ray, tre'y-treas.; R. S. Wertheimer, res. mgr.; Joe MacDonald, paper mill supt.; Herman Gevers, pulp mill supt.; and W. C. Dodge, chief engineer. R. S. Wertheimer will represent the company in the Technical Association. Mr. Wertheimer is also chairman

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Columbia Paper Co. Incorporates

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., February 3, 1930.—Articles of incorporation have been filed with the secretary of state here by the Columbia Paper Company, Inc., having a principal place of business in South Bend, Ind. The corporation has an initial capital stock of 1,000 shares having no par value and is formed to manufacture and deal in all kinds of paper, wares and merchandise. The first board of directors is composed of Earl F. Jessup, Roy H. Olinger and Alfred F. Ankenbruck.

adjustable and non-adjustable—adjustable and non-adjustable—adjustable and non-adjustable—

Obituary

Warren Curtis, Jr.

[FROM OUR REGULAR CORRESPONDENT]

CORINTH, N. Y., February 1, 1930.—Warren Curtis, Jr., for many years a prominent figure in the paper industry of Northern New York, died during the past week at his home in Niagara Falls. His death came as a shock to his many friends in this section who were unaware of his illness. He was general manager of the Ontario Paper Company, of Thorold, Ont., besides serving in a similar capacity with the Tonawanda Paper Company.

He was born in this village 56 years ago, a son of the late Warren Curtis, Sr., founder of the paper and pulp industry at Corinth. After receiving his education in the Rensselaer Polytechnic Institute he became associated with the Hudson River Pulp and Paper Company as engineer. Later he became district engineer for the International Paper Company in charge of all engineering in the Hudson Valley. For a number of years he was president of the Curtis Manufacturing Company, of Corinth, until it was sold to the International Paper Company about a year ago.

For the past fifteen years he resided at Niagara Falls and devoted his full time to the affairs of the Ontario and Tonawanda companies which he was instrumental in organizing. He was a large stockholder and a director in both organizations and also a stockholder in the International Paper Company. While a resident of Corinth he was active in civic enterprises and for two terms served as president of that village.

John J. Jansen

ALBANY, N. Y., February 1, 1930.—Stricken with a heart attack, John J. Jansen, secretary of the A. P. W. Paper Company, died suddenly this week before medical aid could be summoned. He was 73 years old. Born in Holland he came to this country when a youth and secured employment with the A. P. W. Company. He was one of the oldest employees and had been active in organization work up to the time of his death. His wife, one son and a daughter are the survivors.

Richard A. Webb

TROY, N. Y., February 3, 1930.—Richard A. Webb, superintendent of the Albia Box and Paper Company, manufacturers of box boards and paper boxes, of Troy, N. Y., passed away on Thursday, January 16. He had been with the Albia Box and Paper Company since 1900, when it was organized, and remodeled the mill at that time. His son, Harold A. Webb, has been appointed superintendent to succeed his father.

Joseph Prudhomme

PORTLAND, Ore., February 3, 1930.—Joseph Prudhomme, secretary of the Western Paper Converting Company, Salem, Ore., died at his home in Portland suddenly on January 22 of a heart attack.

Now Decatur Paper House Inc.

DECATUR, Ill., February 3, 1930.—The Decatur Paper House, Inc., with a capital stock of $300,000.00, has taken over the stock of the old Decatur Paper Company. The firm has a building sixty by one hundred and fifty, with six floors, sprinkled, centrally located on Wabash track, near the printing business district. It will be the policy to discount all purchases. The buying will be done by the Irwin Paper Company, Quincy, Illinois.

The directors are as follows: Leaton Irwin, Fred W. Hartong, W. C. Westervelt, H. G. Oelklaus, E. A. Damhorst.

Officers of the company are as follows: Leaton Irwin, President; E. A. Damhorst, Vice-President; W. C. Westervelt, Vice-President; Harry W. Hartong, Vice-President; Fred W. Hartong, Treasurer; H. G. Oelklaus, Secretary.

News Print Production for December

Production of news print in Canada during December 1929 amounted to 230,008 tons and shipments to 234,100 tons, according to the News Print Service Bureau. Production in the United States was 112,583 tons and shipments 117,131 tons, making a total United States and Canadian news print production of 342,591 tons and shipments of 351,231 tons. During December, 21,123 tons of news print were made in Newfoundland and 1,277 tons in Mexico, so that the total North American production for the month amounted to 364,991 tons.

Adding to the production of the regular news print mills reporting monthly throughout the year, the small amount made by mills whose product is chiefly other grades, the total North American output of news print paper in 1929 was 4,395,283 tons, of which 2,728,827 tons was made in Canada, 1,392,276 tons in the United States, 255,500 tons in Newfoundland and 18,680 tons in Mexico. The Canadian output was 14.6 per cent more than in 1928, that in the United States 1.8 per cent less, with a gain of 10.7 per cent in Newfoundland and 10 per cent in Mexico, making a total continental increase of 348,883 tons, or 8.6 per cent.

During December the Canadian mills operated at 85.6 per cent of rated capacity, the United States mills at 79.9 and Newfoundland mills at 107.2 per cent. Stocks of news print paper at Canadian mills totaled 24,946 tons at the end of December and at United States mills 19,023 tons, making a combined total of 43,969 tons which was equivalent to 2.7 days' average production.

Acquires Domestic Mills Paper Co.

J. C. Mallalieu, president of Geo. W. Millar & Co., Inc., announces that his company has acquired the entire outstanding capital stock of the Domestic Mills Paper Company, of New York. Domestic Mills Paper Company has been the sole distributor of Perfecto Offset Traveling and Shifting Tympan, made by the Warren Manufacturing Company, and of Leatherette Specialties, made by A. M. Collins Manufacturing Company. They have also handled exclusively in the metropolitan district, Collins Quality Box Coverings, "Evergreen" Sanitary Paper Products, and Samson Sir-Vit Napkins made by Hoberg Paper and Fibre Company have been among their major lines.

Mr. Mallalieu states that the business of the Domestic Mills Paper Company has been taken over completely by Geo. W. Millar & Co., Inc., as of February 1, 1930, and that all the lines and agencies controlled by the Domestic Mills Paper Company will be continued and developed by Geo. W. Millar & Co., Inc. He states that he believes that this will considerably enlarge the business of his company. M. L. Seiler, John J. McHugh, and other salesmen of the Domestic Mills Paper Company, are to become associated with Geo. W. Millar & Co., Inc.

It will be recalled that in 1926, Geo. W. Millar & Co., Inc., acquired control of the well-known firm of Holden & Hawley, Inc., dealers in fine paper, and at that time, W. H. Holden joined the firm of Geo. W. Millar & Co., Inc., where he still continues in charge of their Fine Paper Department.

TAPPI Notes

Norman H. Foley who has been a member of the technical staff of the Marathon Paper Mills at Rothchild, Wis., has been appointed chief chemist of the Menasha mill of the same company.

E. A. Riley, formerly superintendent of the Topsham groundwood mill of the Pejepscot Paper Company, has become superintendent of the Wood Fibre Board Corp. of Lisbon Falls, Maine.

Dr. J. Campbell, director of research for the International Paper Company is now located at Glens Falls, N. Y.

C. E. Dobson Undergoes Operation

C. E. Dobson, secretary of the Southern Kraft Manufacturers Association, has just undergone a serious operation at Touro Infirmary, New Orleans, La.

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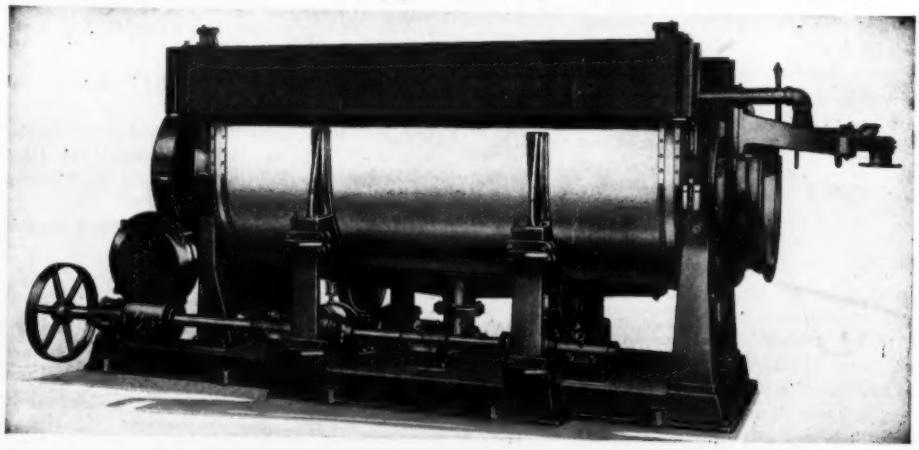

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3686

New York to Add More Tree Nurseries

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., February 3, 1930.—New York State, which already has the largest tree nursery in the world at Saratoga, will add several more nurseries of 100 acres each under the program for reforesting 1,000,000 acres of idle land, now recommended to the legislature. That the time has arrived to make a serious attempt to bring the reforesting program up to a proper schedule has apparently been recognized. The hearings conducted on the proposal to widen the work by the creation of utility forests to be planted and subsequently lumbered by the state have brought out a unanimity of opinion.

Until the Hewitt bill was adopted last year there had been no large attempt made to advance a program of general reforesting. The measure permits the state to acquire unused land in units of not less than 500 acres and the present program is in further enlargement of the idea. Just now while the output of the state nurseries is 36,000,000 trees a year this will not be sufficient for so huge a program as the reforesting of 1,000,000 acres and it is planned in the recommendations submitted by the Conservation Department to add one nursery a year for the next few years.

It was pointed out that in 1928 22,000,000 trees were shipped from the state nurseries for actual planting. On this basis between 25,000 and 40,000 acres were planted. This is only about one-fourth of the farm land that is being abandoned in the state each year. That New York State industries need the additional timber resources is considered self evident. The paper and wood working industries now import about ninety-five per cent of the timber supply whereas the state was once the principal lumber center of the east. By careful planning and continued reforesting it is foreseen that at the end of the fifteen year period specified for the planting of the 1,000,000 acres about half the state's acreage will again be in trees.

Owing to the large amount of land adapted for tree production the program is the most important from the conservation standpoint ever placed before the state. Under the state constitution no lumbering can be done in the forest preserve. The state does much yearly planting in the forest regions to increase their beauty and eliminate the destructive work of fires but this timber is in a playground area and is not for commercial use. The idea of providing public forests which when grown can contribute to the commercial advantage of the state has been accepted abroad for centuries. Only recently, however, have American communities taken it up. In this state there is a growth of the idea and counties under the Hewitt law are permitted to establish public forests for future cutting. The new state plan is more ambitious than any proposed in other districts. It is proposed to reforest on an upward scale beginning with 13,000 acres in 1930, increasing to 100,000 acres a year in 1933, and continue at that rate until 1945 when the 1,000,000 acres would be under tree plantation.

Paper Makers to Confer at Montreal

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., February 1, 1930.—Statements given out by officials of the International Brotherhood of Papermakers lead to the belief that all existing wage and working agreements between paper manufacturers of this country and Canada and the various organizations identified with the industry will be reopened this spring. The matter will be brought up at the coming conference in Canada and if the delegates decide on any changes in working conditions or wages the agreements must necessarily be reopened. A statement to this effect was made here this week by Matthew Burns, president of the Intetrnational organization. While some agreements expire in the spring many others carry a continuation clause which continues an existing agreement from year to year provided neither side gives the other a month's notice of a desired change.

If any program is adopted at the coming conference on the five-day week proposition it will be so constructed that in application it will spread over a period of years rather than begin immediately. The first effort on the part of the labor organizations will be to eliminate the last eight hour shift on Saturday night. The Manning Paper Company, of Troy, has already adopted a working schedule whereby the night shift now works five days but receives wages for six. Indications point to a large attendance at the Montreal conference. Locals throughout the United States and Canada have notified local headquarters that they are planning to send delegates and any action taken at the conference will be of intense interest to the paper manufacturers.

Whether the conference will resolve itself into a later meeting with paper manufacturers will not be known until it is held. The International Brotherhood of Pulp, Sulphite and Paper Mill Workers will also hold a conference in Montreal on the same date and J. P. Burke, head of the organization, said that notices had already been sent out to the various locals.

Griffith-Hope Co. Expands

The accompanying illustration shows the new and enlarged plant of the Griffiths-Hope Company of Milwaukee, Wis., makers of Paper Dispensing Cabinets for Towels, Napkins and Toilet Papers.

NEW PLANT OF GRIFFITH-HOPE CO.

The company has just installed new and up-to-date equipment which enables it to give the mills using these dispensing cabinets quick service and the finest quality and finish possible on these cabinets.

The Griffiths-Hope Company is now the largest manufacturer of this kind of equipment.

Junior Technologist

Applications for junior technologist must be on file with the Civil Service Commission at Washington, D. C., not later than April 8. The examination to fill vacancies in the Bureau of Standards, Department of Commerce; in the Geological Survey, Department of the Interior, and in positions requiring similar qualifications, for duty in Washington, D. C., or in the field.

The entrance salary is $2,000 a year. Higher-salaried positions are filled through promotion. The optional subjects are (1) ceramics, (2) paper technology, (3) petroleum technology, (4) rubber technology, (5) textile technology.

Competitors will be rated on general chemistry, elementary physics, mathematics up to and including calculus and practical questions on each optional subject chosen. Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

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Col. Donovan To Speak Paper Week

Col. William J. Donovan, New York, will be the principal speaker at the annual banquet of the American Paper and Pulp Association, which is to be held at the Hotel Pennsylvania, New York, the evening of February 20.

Because of Col. Donovan's brilliant record as Assistant Attorney General of the United States under President Coolidge, he is unusually well qualified to discuss the relations of government with business, and in addition he is thoroughly familiar with trade association work. He is a man of charming personality, a forceful and eloquent speaker, and is expected to supply the cap stone to the closing event of "Paper Week."

In addition to his other achievements, Col. Donovan is well known as the Colonel during the war, of the famous fighting 69th regiment of New York which was mustered in as the 65th Infantry. He was awarded the Congressional Medal of Honor, the D S C., the D S M., French Legion of Honor, and the Croix de Guerre. At present he is a member of the law firm of Donovan & Raichle, New York.

COL. WILLIAM J. DONOVAN

The other speakers at the banquet will be, Charles Milton Newcomb, Cleveland, and the Rev. Dr. Nehemiah Boynton, Boston. Dr. Boynton is well known to all paper men. Mr. Newcomb will talk on "The Psychology of Laughter," a humorous-scientific speech which will be both entertaining and inspirational.

The decorations of the banquet hall this year, will be all of paper, and a strikingly unique entertainment feature is promised. The headquarters office of the American Paper and Pulp Association, reports a lively demand for table reservations at the banquet, and the indications are that close to one thousand guests will be entertained.

Woodlands Section to Meet

The Tenth Annual Meeting of the Woodlands Section of the American Paper and Pulp Association will be held at the Hotel Pennsylvania, on February 19. The meeting is scheduled to begin at 10:00 a.m. in the Foyer of the Banquet Hall. The meeting will be devoted to the presentation and discussion of the regional committee reports on present and future pulpwood prices. These reports constitute a preliminary survey of the economic basis for pulpwood forestry in each region, arranged to permit comparison of competitive chances.

The Section is making an earnest effort to arrive at an impartial analysis of the competitive chances for pulpwood forestry. This is the first to be undertaken by an American wood-using industry.

To Establish Largest Machinery Library

DETROIT, Mich., February 3, 1930.—The largest and most complete machinery library in America if not the world, an archives where complete information concerning the machinery in use in all industries, and which will give decided impetus to the movement to operate American industries along scientific methods, will be established at MacDonald Brothers Engineering Laboratories, Inc., according to an announcement of H. E. MacDonald, vice-president and general manager of the laboratories organization.

The laboratory which will be erected at 1500 Oakman Boulevard, in the heart of industrial Detroit, will also contain a permanent exhibit of all kinds of machine tools and allied supplies. It is sponsored by MacDonald Brothers, Inc., nationally known production engineers with headquarters in Boston and with offices in several of the principal cities of the United States. Kidder, Peabody & Co., internationally known financers have endorsed it. Work on the construction of the building will be started as soon as the architects' plans have been complete.

"The creation of the library," according to Mr. MacDonald, "will fill one of the greatest needs of American industry. Such a central encyclopedia of information will help materially to reduce the loss of millions of dollars that are being wasted annually by industry through the purchase of inefficient and obsolete machinery.

"Simultaneously with the opening of the laboratory, next year," he says, "the library will be completed. Factory executives thereafter will be able, either through visiting or communicating with the library, to obtain complete information not only about machine tools in use in their respective trades but in any and all industries. Such information as the library will collect, will save many concerns thousands of dollars annually.

"Through the absence of such a library thousands of units of machinery are purchased abroad that should be bought here, often at a tremendous loss and delay to the purchasers.

"The library will not only be of untold value to the purchasers of machinery and allied supplies, but will be of great educational value to the technical schools and colleges of the country, whose teachers and students will be allowed the use of its service free of charge."

Waste Heat Recovery

Plant managers and engineers in industries using large amounts of hot water or other liquids for process work will be interested in the methods which have been developed by The Griscom-Russell Company, for recovering heat from waste hot liquids.

Instead of discharging these spent hot liquids to the sewer, as is frequently done, much of the heat which they contain may be transferred to the incoming cold fresh water by means of a Griscom-Russell Multiwhirl or Vaneflo Exchanger or Bentube Waste Liquor Cooler.

This apparatus, when combined with the necessary pumps, tanks, and control equipment, provides a readily installed and largely automatic system, which users report saves sufficient fuel to return 30 to 100 per cent or more of the initial cost each year.

These systems are particularly adapted to chemical plants, dye houses, paper mills, bleacheries, woolen mills, laundries, etc., and the various types of heat exchangers and coolers containing lint, solids or other impurities, as well as hot water.

Griscom-Russell Apparatus for recovering waste heat is also adapted for recovering the heat from boiler blowdowns, returns from heating systems, and Diesel engine exhaust gases. A recently published bulletin describes this apparatus, gives examples of the results being obtained from various installations, and includes diagrams of typical layouts with illustrations of the equipment used. Copies may be obtained by addressing The Griscom-Russell Company are now located at 285 Madison avenue, New York City.

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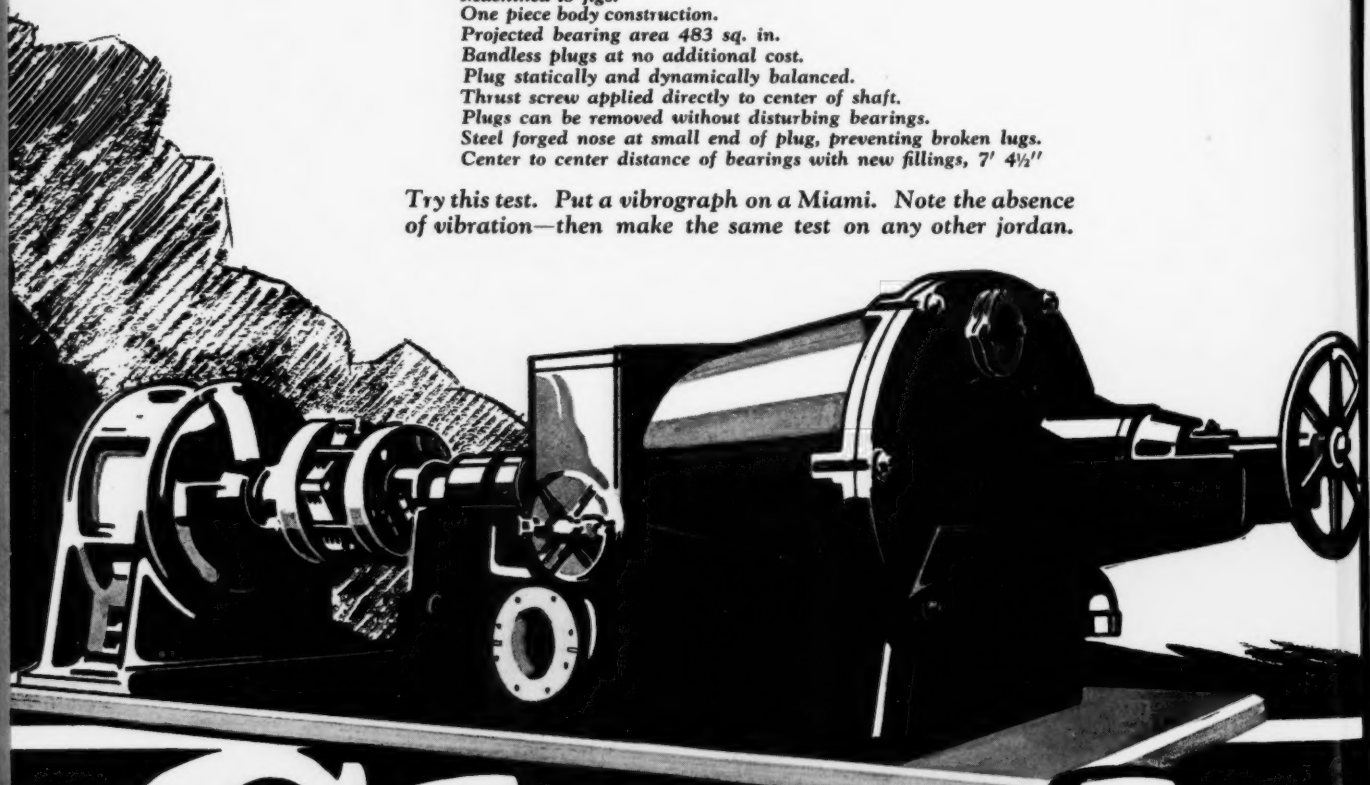
Check these points of Miami design with what you know about other jordans and be your own judge.

Side inlet.
Machined to jigs.
One piece body construction.
Projected bearing area 483 sq. in.
Bandless plugs at no additional cost.
Plug statically and dynamically balanced.
Thrust screw applied directly to center of shaft.
Plugs can be removed without disturbing bearings.
Steel forged nose at small end of plug, preventing broken lugs.
Center to center distance of bearings with new fillings, 7' 4½"

Try this test. Put a vibrograph on a Miami. Note the absence of vibration—then make the same test on any other jordan.



Shartle

New York Trade Jottings

Lord Rothermere, British newspaper owner, and president of the Anglo-Canadian Pulp and Paper Mills, Ltd., sailed from New York last Frday, aboard the steamer *Bremen*.

* * *

Coy, Disbrow & Co., general paper merchants, are now comfortably housed in their new quarters at 686-690 Greenwich street, New York, where they have a wrapping paper house second to none in the city.

* * *

Myron G. Dunnagan, recently with the Portland office of the Pacific Northwest Paper Mills, Inc., has been appointed eastern sales manager for the corporation, with headquarters at 551 Fifth Avenue, New York.

* * *

The Kalbfleisch Corporation, of 200 Fifth Avenue, New York, announces the acquisition of the sulphate of alumina business of the Central Chemical Corporation, of Kokomo, Ind., and will take over the operation and management of this plant.

* * *

The Resolute Paper Products Company, of 175 Fifth Avenue, New York, have purchased the entire stock consisting of about twelve cars of toilet paper, paper towels, and paper napkins, from a Northern mill that is discontinuing these grades.

* * *

Friends are congratulating Thomas J. Burke, secretary-treasurer of the Cost Association of the Paper Industry, with headquarters at 18 East 41st street, New York, upon the fact that his elder son, Thomas Gerald Burke, who won a scholarship at the Hotchkiss School, Lakeville, Conn., last year, has now been elected president of the Junior Class and was also placed on the Third Honor Roll.

* * *

The M. & F. Schlosser Paper Corporation, for many years located at 220 West 19th street, New York, has leased larger quarters in the Holland Plaza Building, just completed on the triangular block facing the entrance to the vehicular tunnel and bounded by Varick, Hudson, Canal and Watts streets. This is the tenth concern prominent in the paper trade to establish headquarters in the Holland Plaza zone in the past few years.

* * *

Texas Gulf Sulphur Company, Inc., 75 East 45th street, New York, reports for the calendar year 1929 net income of $16,247,478 after costs, expenses and Federal taxes, equivalent to $6.40 a share on the 2,540,000 no par capital share outstanding. This compares with $14,517,619, or $5.72 a share, on the same capital share basis in the preceding year. Net income for the quarter ended December 31, amounted to $4,766,989, or $1.88 a share, on the capital stock, which compares with $4,028,959, or $1.58 a share, in the preceding quarter and with $4,162,238, or $1.64 a share, on the capital stock in the corresponding quarter of 1928.

International Combustion Reorganization Plans

A committee of six has been formed to prepare a plan for the reorganization of the International Combustion Engineering Corporation and its subsidiary and affiliated companies. Some of the members of this committee, it is believed, are at the present time on an inspection tour of the company's properties.

The committee consists of E. W. Stetson, vice president of Guaranty Trust Company of New York, chairman; J. N. Darrow, of Otis & Company; George L. Bourne, chairman of the Superheater Company; R. E. McMath, vice president of Bethlehem Steel Company; Charles Hayden of Hayden, Stone & Company; and Nathan L. Amster.

The International Combustion Engineering Corporation went into the hands of a receiver shortly after the recent break in the stock market.

Outlook for Newspaper Advertising

William A. Thomson, Director of the Bureau of Advertising of the American Newspaper Publishers' Association, discussed the prospects for newspaper advertising for 1930, at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, held at the Fraternities Club last Monday. There was an excellent attendance.

Mr. Thomson described the work of the Bureau of Advertising in a comprehensive manner. He stated that the volume of national advertising in the newspapers during 1929 broke all preceding records, despite the fact that the Stock exchange debacle slowed down business considerably in November and December.

Competition for advertising space will be keener than ever during 1930, Mr. Thomson predicted, and the newspapers will have to face more efficient and highly organized efforts from the magazines and other periodicals. However, a questionnaire sent out to 6,000 national advertisers showed that the greater percentage planned to maintain or increase their appropriation for advertising during 1930 and only a small percentage declared their intention of decreasing their appropriation.

Another favorable factor in the situation is that reports from merchants throughout the country show that stocks in hand are limited, so that buying should not be curtailed to any extent. In conclusion, Mr. Thomson expressed the belief that 1930 will prove a good year for the newspapers because it is the disposition of one and all to make it a good year. His address was thoroughly enjoyed by all present and was followed by an interesting discussion.

New Pump Bulletin

Goulds Pumps, Inc., of Seneca Falls, N. Y., are now distributing a new illustrated pump bulletin, entitled "Centrifugal Pump Selection Charts," which contains a complete description of the Goulds line of horizontally-spilt, enclosed-impeller, single-stage-double-suction pumps.

This is the first of a series of similar bulletins, which will eventually cover the entire line of Goulds Single and Multi-Stage Centrifugal Pumps for all services and is devoted to those types and sizes which will take care of a large portion of the pump requirements encountered in industry.

A number of charts show the extremely wide range of capacities and heads covered by these pumps. From these charts can be deterined the pump to use for any given capacity and head, and also the size of motor required to drive it.

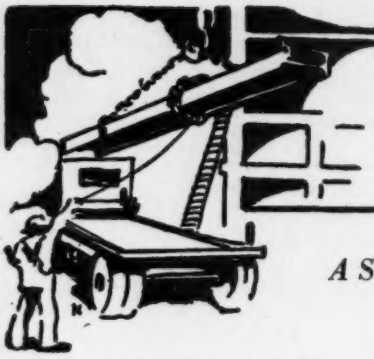
Diamond Alkali Handbook

Pulp and paper manufacturers will find the Second Edition of the Diamond Alkali Handbook, just published by the Diamond Alkali Company, of Pittsburgh, Pa., full of invaluable information to the industry. The handbook contains chapters describing the manufacture and uses of soda ash, caustic soda, liquid chlorine, etc., and is profusely illustrated.

The Diamond Alkali Handbook also contains a number of valuable temperature charts and tables of capacities of rectangular and cylindrical tanks. Other tables give the international atomic weights, equivalent weights, shipping weights of Diamond products, and conversion formulas.

Smith Paper Co. Completing Improvements

LEE, Mass., February 4, 1930.—Excellent progress is reported on the additions to the Columbia and Niagara Mills of the Smith Paper Company here. The extension to the former mill will be of brick and concrete and steel will enable a third machine to be added. The enlargement to the Niagara mill is for the purpose of housing the remodeled machine that will be used for the manufacture of paper used by electrical concerns. Large orders for condenser paper used in the electrical and radio industries are understood to have led to the improvements. The Lynch Brothers Brick Company of Holyoke are the general contractors.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Spring Grove, Pa.—The P. H. Glatfelter Company, Spring Grove, is arranging an expansion and improvement program at its mill, to include the erection of a large addition, for which details will be determined at an early date. The new unit will be located on land now being used for the main line of the Western Maryland Railroad Company, and surveys are now in progress to change the tracks along the mill to accommodate the conditions. The structure, it is understood, will provide for large increase in present capacity at the plant; estimated cost has not been announced.

Bogalusa, La.—The Bogalusa Paper Company, Bogalusa, La., contracted with the Louisiana Power and Light Company, New Orleans, La., for electric power service at its mill, totaling about 5,000 horsepower. The utility company is planning the early construction of a step-down power substation at the mill site, with the building of a transmission line from Amite, La., where a large central substation is located, to the plant, a distance of about 40 miles. The Amite substation will be enlarged and increased in capacity. The program is reported to cost about $300,000.

Muskegon, Mich.—The Muskegon Paper Box Company has been organized under state laws with a capital of $110,000, to take over and expand the company of same name, with local plant on West Western avenue. It is understood that increased output will be arranged at an early date. The new company is headed by E. J. and J. L. Benton, and H. A. Meier.

Grand Rapids, Mich.—The Handy Wax Corporation, manufacturer of wax paper products, is carrying out an expansion and improvement program for increased capacity, including installation of new automatic machinery and auxiliary equipment. During the coming months, further enlargements are contemplated, designed to more than double the present output.

Philadelphia, Pa.—The Frankford Paper Box Manufacturing Company, Inc., Rising Sun avenue and Bristol street, has leased the first floor of a factory building at Amber and Westmoreland streets, and will occupy for expansion in output.

Wellsburg, W. Va.—The Harvey Paper Mills Company, Wellsburg, has approved final plans and awarded a general contract to the Austin Company, Euclid avenue, Cleveland, Ohio, for a new addition to its paper bag mill, consisting of a one-story unit, 95x240 feet, reported to cost about $200,000, with machinery. Foundations will be laid at once and superstructure placed under way. It is proposed to have the unit ready for service in March, when a capacity of about 100,000 bags per day will be developed at the plant. The company is a subsidiary of the Pillsbury Flour Mills Company, Minneapolis, Minn. H. M. Dickinson is general manager at the Wellsburg mill.

New York, N. Y.—The New York Label and Box Corporation, recently organized by Frederick Haedrich, 3072 avenue R, Brooklyn, N. Y., and associates, with capital of $50,000, is said to be planning the early operation of a local plant for the manufacture of boxes and containers.

Ypsilanti, Mich.—The Peninsular Paper Company, Ypsilanti, is running on a close to normal production basis, giving employment to about 135 operatives, or approximately the same number as at this time a year ago. It is expected to continue on this basis for an indefinite period.

Philadelphia, Pa.—Albert Eichorn & Sons, Turner street, are considering the rebuilding of portion of paper box and container manufacturing plant, damaged by fire, January 28. An official estimate of loss has not been announced.

Oswego, N. Y.—The St. Regis Paper Company, Watertown, N. Y., is said to have plans under way for the construction of a new addition to mill at Oswego, operated under the name of Taggart Oswego Paper and Bag Corporation. It will be one-story, 60x100 feet, designed for machine service, reported to cost in excess of $75,000, with equipment. It is understood that work will be placed in progress at an early date.

Chicago, Ill.—The Acme Bag and Paper Company, Inc., has been organized under state laws with capital of $20,000, to take over and expand the plant and business of the company of same name, with factory at 823 South California avenue. Samuel Harris is the principal incorporator of the new organization.

Manchester, Conn.—The Rogers Paper Manufacturing Company has approved plans for the construction of three new one-story units to be used for laboratory service, to be 20x36 feet, 20x30 feet, and 20x23 feet, respectively. It is understood that the buildings will be of temporary character. Estimated cost has not been announced.

New York, N. Y.—The M. & F. Schlosser Paper Corporation, 220 West 19th street, has leased space in the Holland Plaza Building, on block bounded by Varick, Hudson, Canal and Watts streets, and will occupy for expansion at an early date.

Providence, R. I.—The United States Fiber Company, Inc., recently organized with a capital of 2,500 shares of stock, no par value, is said to be arranging for operation of a local plant. The company is headed by Harlan Flint, Warwick, R. I., and James H. Given, Providence.

Watervliet, Mich.—The Watervliet Paper Company is running under a regular capacity schedule, with normal working force, and is said to be planning to hold to this basis for an indefinite period. Orders booked up to the present time compare favorably with those secured a year ago in January.

Milwaukee, Wis.—Fire recently damaged the factory at 485-87 Sixth street, occupied by the American Bag Company, Badger Bag Company and the Powerstein Brothers Bag Company, with total loss reported at $45,000. It is understood that the damage will be replaced by the different interests.

Los Angeles, Calif.—The Los Angeles Paper Box Company, 3324 South Main street, has superstructure in progress for its proposed new plant unit at 2615 Pitt street, to be one-story, 150x200 feet, reported to cost in excess of $75,000, with machinery. It is proposed to have the structure ready for occupancy at the earliest date. William Knowles, 1214 Webster street, Oakland, Calif., is architect.

Cloquet, Minn.—The Northwest Paper Company, Cloquet, is said to have plans maturing for proposed new additions to mill, recently referred to in these columns, and will complete details so

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as to break ground early in the spring. The project will include the installation of a new paper-making machine, beaters and accessories. Estimated cost has not been announced. The Jacobson Engineering Company, Plymouth Building, Minneapolis, Minn., is engineer. H. S. Hornby is president.

Wilmington, Del.—The Pusey and Jones Corporation, Wilmington, is said to have secured another order for two paper-making machines for export, name of purchasing company being temporarily withheld. This follows the completion of a paper-making machine for the Union Company at Drammen, Norway, and which unit will be shipped at once. The new machines will be designed for the production of news print and will be of large, high-speed type; they are reported to cost close to $900,000.

Sault Ste. Marie, Ont.—The Abitibi Power and Paper Company, Ltd., Montreal, Que., is said to be running on close to normal schedule at local mill, with regular working quota, to be continued for an indefinite time.

New Companies, Etc.

Passaic, N. J.—John Regas, Inc., Passaic, has been incorporated with a capital of $100,000, to manufacture commercial paper products, stationery, etc., and deal in same. The incorporators are John Regas and John Jesion. The company is represented by Patlen & Amlicke, 72 Lexington avenue, Passaic, attorneys.

Boston, Mass.—Cook & White Manufacturing Company has been incorporated with a capital of $50,000, to manufacture and deal in corrugated and other boxes and containers. Fred F. Cook is president; and Joseph G. White, 64 Trowbridge street, Arlington, Mass., treasurer and representative.

Indianapolis, Ind.—The Sefton Container Corporation, recently organized under Delaware laws to manufacture and deal in paper and other boxes and containers, has filed notice of organization to operate in Indiana, and will be represented by John Hyde, Anderson, Ind.

Cost and Technical to Meet May 23-24

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., February 3, 1930.—The third annual interstate meeting of the Cost and Technical Association of the paper industry will be held in Kalamazoo May 23 and 24 next, according to Harry C. Bradford. The date was determined at the meeting of the Kalamazoo Valley division meeting, held Wednesday evening at the Columbia Hotel.

This gathering will bring to Kalamazoo representatives of mills located in Michigan, Ohio, Wisconsin, Indiana and Illinois. A fine program will be arranged for the two days' program, with a little fun and recreation thrown in to savor the business sessions. The two previous gatherings have been well attended and the efforts of the Kalamazoo Valley division have been highly commended for staging such gatherings.

There were two speakers at the Wednesday night dinner session. Harry A. Harvey, of the Sutherland Paper Company, spoke on "Auto Board." Arthur Fitzgerald, of the Kalamazoo Vegetable Parchment Company, took for his subject, "Planning Purchases for a Paper Mill."

Michigan Paper Firms Merge

[FROM OUR REGULAR CORRESPONDENT]

DETROIT, Mich., January 27, 1930.—Plans have been arranged for the merger of the Grand Rapids Paper Company and the Union Paper and Twine Company of Michigan, Inc., with headquarters in Detroit. This merger covers operations in the Grand Rapids territory and the new company will operate under the former name but as a division of the Union Paper Corporation. The Union warehouse will be discontinued and operations confined to the offices of the Grand Rapids Paper Company. W. A. Stewart, heretofore manager of the Grand Rapids office of the Union Paper and Twine Company, will continue as head of the consolidated organization.

Dr. West Reappointed Lieutenant Colonel

Dr. Clarence J. West, Chairman of the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry, and Director of the Research Information Service of the National Research Council, has recently been notified that he has been reappointed as Lieutenant Colonel in the Chemical Warfare Service, Officers' Reserve Corps, of the United States Army.

During the World War, Dr. West served as a Major in the Chemical Warfare Service of the regular Army, and was stationed at the American University, Washington, D. C., where he was assistant to Lt. Col. W. D. Bancroft, who was in charge of the Confidential Reports Section. Between the time of the Armistice and July 1, 1919, when he was mustered out of the

LT. COL. CLARENCE J. WEST

regular army, he was employed in the preparation of a series of some twenty-five monographs on various aspects of chemical warfare.

After leaving the regular army, Dr. West was appointed a Major in the Reserve Corps, C. W. S.; at the expiration of this commission in 1925, he was promoted to the rank of Lt. Col.

Dr. West is known to his fellow officers in the C. W. S. as the co-author, with Brig. Gen. Amos A. Fries, of "Chemical Warfare," the only textbook on this subject in English, outside of the service monographs prepared by the various army schools.

Dr. West is known to the paper industry as its more-or-less official bibliographer, having served as chairman of the Committee on Abstracts and Bibliography since the death of Mr. Henry E. Surface in 1920. Among his publications are: "Bibliography of Paper Making, 1900-1928;" "Reading List on Paper Making Materials," of which two editions have been published; "Classification and Definitions of Paper," the second edition of which has been exhausted; and numerous special bibliographies which have appeared from time to time in the PAPER TRADE JOURNAL.

In his work for the National Research Council he has also prepared many books and pamphlets, dealing with compilations of interest to research workers. Among these are "Bibliography of Bibliographies on Chemistry and Chemical Technology, 1900-1928," in two parts; "Handbook of Scientific and Industrial Societies and Institutions in the United States;" "List of Industrial Research Laboratories in the United States;" etc. He is also editor of the "Annual Survey of American Chemistry," now in its fourth volume.

Lockwood's Directory of the Paper and Allied Trades is indispensible to every paper man.

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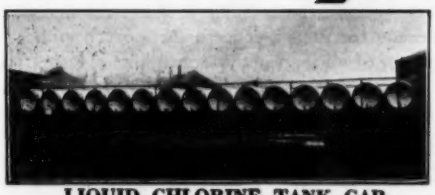

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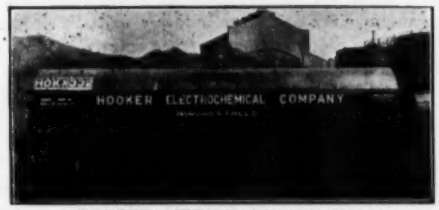
Multi-Unit Ton Containers



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POWER PLANT SECTION

REDUCING POWER COSTS THROUGH UNIT TREATMENT

Conducted by **Reginald Trautschold Consulting Engineer**

Valve Service A Dominant Consideration

Requirements Exacting and Severe

With the full complement of valves needed in advanced power plant operation, as well as valves on high, medium and exhaust pressure steam lines in power plant and mill and those on acid, water, bleach and stock lines, etc., essential and indispensable in modern paper making activities, proper valve service should be indeed a matter of dominant consideration to all pulp and paper mills. In no other industry are the valve requirements so exacting or so severe. In no other industry are there as many varieties of valves employed and in no other industry does the attainment of low production costs depend so directly upon the proper and efficient discharge of valve functions.

Such functions are, or rather the sole function of any valve is, to control, regulate or change the course and action of the medium passed by the valve. In paper making, every ingredient in the finished sheet and every medium entailed in production, in, through and from power plant and mill, pass through a whole series of valves. In fact, valves govern and control every operation and every process in pulp and paper production and satisfactory valve service, consequently, is highly instrumental in regulating production costs.

Almost every variety of valve has to be used and each may be required to function under extremely exacting conditions. So severe are the requirements at times, in fact, that valve standards found adequate in other lines of industrial activity simply do not meet the requirements imposed in modern pulp and paper mills. This situation is probably not appreciated either by the mills in general or by many manufacturers of valves. In fact, one well known builder of high grade valves when attempting within the last few years to cultivate the pulp and paper mill field as an outlet for his quality products, found that the business required better valves than any he had manufactured up to that time. That he succeeded in interesting a number of prominent mills in his products and secured some desirable business was due solely to the fact that he grasped the situation and promptly built special and better valves, more nearly conforming to paper mill requirements and, incidentally, commanding a much higher price.

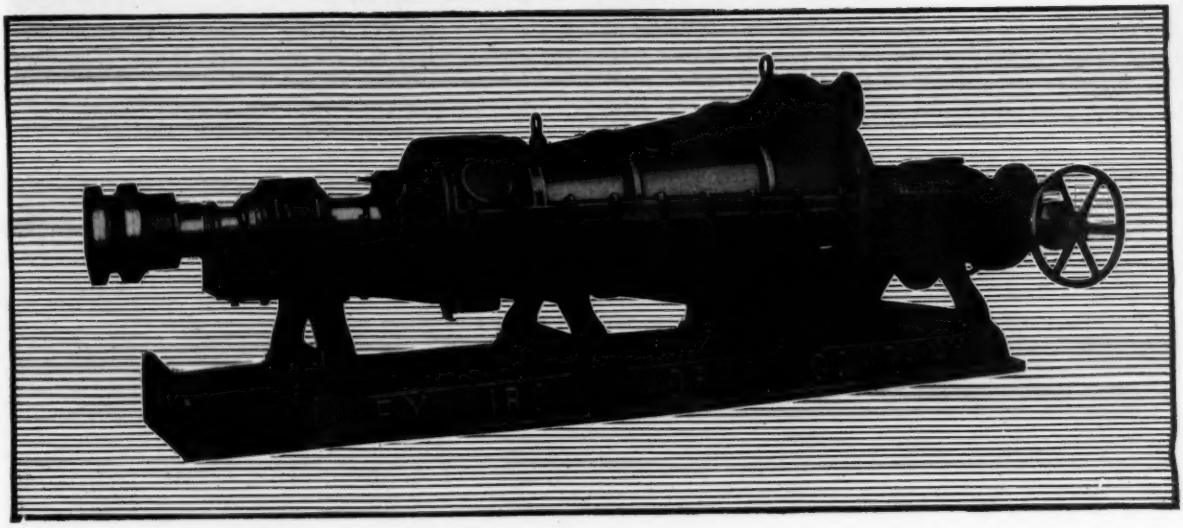
Such experience should be quite illuminating, for when an industry attains a growth which ranks its business as third or fourth among the sixteen major industries of the country and fourth or fifth in respect to the amount of power used it acquires the prestige enabling it to dictate and command proper attention to its needs by manufacturers of any essential equipment or supply. The paper industry occupies just such a position today and as evidenced by the experience of the valve manufacturer just cited has the resources to pay for and possesses the vision to appreciate the value of satisfactory equipment supplies, on a service rendered basis. That is, modern pulp and paper production is rapidly being placed on sound economic grounds so far as the purchase of essential production equipment is concerned. It is not the first cost so much as the ultimate cost which concern the modern mill.

Today, 45 per cent of all the rightly termed high-pressure plants on this continent serve pulp and paper mills. More than this, by far the highest pressure plant of them all will serve a paper mill. Also, per active establishments there are more pulp and paper mills served by power stations in which steam is generated at pressures upward of 300 pounds per square inch than are to be found in any other industry, not even excepting that of the electric public utility field. These are simply examples of the leadership in industrial affairs assumed by the paper industry and are properly mentioned for the reason that the marked trend toward high steam pressure operation in the industry is a very potent influence in connection with the valve requirements in pulp and paper mill establishments.

Valve Requirements

It is entirely out of the question, of course, to attempt any full discussion of valve requirements for pulp and paper mill services in the present installment, or in several installments, even if space were available, but a few brief comments, in the nature of fragmentary and more or less scattered notes, will be presented with the view of focussing attention upon the requirements in valve construction and design which the paper industry should and can command. Obviously, it is only by voicing and recording requirements that satisfactory valve service can be secured and in order that a mill may make intelligent demands it is quite necessary that its operating personnel be familiar with valve requirements and be cognizant with approved developments in valve constructions.

As for the requirements for a satisfactory valve, there are but two: first, the valve must be of sufficient strength to withstand the maximum strain, or combination of stresses, encountered in service; and, second, it must properly perform its function. However, not only must valves be strong enough and heavy enough to withstand the maximum pressure to which they may be subjected, but in addition must be capable of withstanding varying pressures and temperatures, strains of expansion and contraction, weight of piping, stresses incident to settling, and corrosive and cutting action of transmitted mediums. Their duty is to control and regulate the flow of the transmitted medium through the pipe or connection on which the valves are located. To function properly, the valves must be constructed so that they will close tightly under any and all service conditions and that when open they will present as unobstructed a passage to the flow of the transmitted medium as is practically possible.



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The valve which can be depended upon always to seat tightly, its primary obligation, and is strong enough to withstand the most severe strains to which it may be subjected meets all constructional requirements for a serviceable valve. It is the type of valve required by the paper industry and no other type can be depended upon to render satisfactory valve service. Too much emphasis cannot be placed on these definite and it would seem obvious requirements, for unless they are realized in full serious inefficiencies in mill operation are inevitable. Also, the conditions under which the valves are called upon to function in the modern pulp and paper mill plant are far different from those which pertained only a few years ago. The requirements in many instances are very much more exacting and severe.

Valve Classification

As virtually every form and variety of valve is essential one place or another in power plant or mill, it would seem advisable to approach even a cursory discussion of valves by groups, or classes, so far as possible, rather than as individual units. Globe, angle and cross valves, for instance, may be properly looked upon as one class, check valves as another and gate valves as a third. In one or another of these classes, the majority of valves can be placed, though, of course, there are numerous valves for special services, such as blow-off, back pressure, safety, etc., which command more individual consideration and may be conveniently termed valve specialties, presenting as they do individual considerations in respect to design and construction. In addition, there are many other valves which in form and function really belong in these general classes but which constitute component parts of controls and regulators and as such assume distinctive characteristics.

No coverage of all these classes can be made here, quite obviously, and very little attention can be given to valve metals, but even brief remarks concerning constructional requirements and approved practices in valve utilizations should bring out certain pertinent considerations. So far as valve metals are concerned, their ability to withstand the corrosion and cutting actions of the transmitted medium and their possession of adequate strength are the dominant factors and these are altogether too involved to permit of any considerable analysis in a general discussion.

Globe, angle and cross valves differ only in regard to general form, their constructional details in respect to functioning parts being similar. However, the ability of the various types to withstand service strains and temperature varations is by no means identical. While the valves can be made virtually symmetrical in transverse section, such balanced distribution of metal, essential for the complete avoidance of warpage of valve seat under varying thermal stresses cannot be effected in globe and angle valves at least. The inevitable result is that expansion and contraction stresses cannot be perfectly balanced and a certain unavoidable deformation of the valve seat bridge occurs with variations in temperature. In the case of cross valves, since such valves may be balanced both transversely and longitudinally, so far as the distribution of metal is concerned, seat warpage is not so serious. It cannot be entirely avoided, however, on account of the stiffening effect of the valve seat bridge, which, incidentally, is a defect common to all three varieties of valves and also to most other classes of valves. The cross valve is simply less affected by seat warpage than globe and angle valves, as evidenced by the fact that almost without exception a cross valve gives less trouble than either of the other two, when in comparable service, and functions more effectively, i.e., is less liable to leakage failings.

The primary obligation of a valve being to seat tightly when closed, it is evident that the secrets of an efficient valve and of satisfactory valve service are dependent in very large measure upon the success with which intimate contact can be effected between the valve seat and the valve disc. At other than ordinary temperature, or to be more exact at any other temperature than that at which the valve seat was finished, the valve seat bridge is unavoidably warped to some extent. On the other hand, the valve disc, having a balanced distribution of metal in all normal planes, remains concentric at all temperatures, simply expanding or contracting evenly with variations in thermal conditions.

To secure intimate contact between disc and valve seat, at least line contact must be effected, preferably surface contact, for only point or spot contact, as results when there is any breakage in the continuity of the seal between disc and seat, means a leaking valve. Surface contact, the condition which minimizes valve depreciation and upkeep, is positively attained in the construction employing a renewable, slightly resillient disc carried in a disc holder and a flat seat against which the adjustable disc is pressed when the valve is closed. The elasticity of the disc permits it to conform to any slight deformation of the seat surface occasioned by temperature variations. This construction is now generally conceded to be the one rendering the most satisfactory service, provided, of course, that a resilient disc of a composition which will withstand the severity of the service encountered can be utilized. Where pressures and temperatures are too high or where the nature of the medium transmitted is such as to cause the medium to attack the composition discs chemically other construction, obviously, must be resorted to.

A conical formed, rather than simply a beveled disc is the customary selection, the valve seat being recessed or beveled so as to conform with the side slope profile of the conical hard metal valve disc. If no warping of valve seat occurs, conical surface contact is secured when the valve is closed and even when some slight deformation of the seat takes place, the warpage is not apt to be uniform from top to bottom of seat and the possible breakage of contact seal is usually only partial, is that intimate line or irregular surface contact on a warped plane is pretty well assured. In any case, valve leakage is considerably less than in the case of attempted normal contact between slightly, non-conforming warped surfaces.

The expediency of increasing the depth of the cone sections of both disc and seat serves to insure tighter valve closure and where the valve seats are made removable and renewable, as is customary in high-pressure valves where the seats are made of special wear resisting metal, the projection of the seat above the seat bridge serves the same purpose. The upper flange of such elevated seats stiffens the contact section of the seat so that it is not so much effected by the warpage of the seat bridge proper.

Valves effecting the desirable surface contact by the flat disc and by conical disc constructions may differ widely in one respect, however, and one which may exert considerable influence when throttling service is entailed, service which is unusually severe in pulp and paper mills. The control of steam flow can be very much more sensitively effected with a cone surface seating valve, if the contact seal surface covers sufficient span, than with one depending upon substantially flat surface contact for tightness. With the flat disc construction there is an escape of a large proportion of the confined medium almost as soon as the disc leaves its seat, while with the cone disc construction of sufficient span the escape is much more gradual. That is, the conical complement of disc and valve seat is much more effective so far as throttling action is concerned.

In a recorded test of several valves, the much quicker opening valve permitted the passage of about 70 per cent of the maximum steam flow at 10 per cent of valve opening, half a turn of the valve wheel, while with a deep cone disc type of valve, at 10 per cent of valve opening, only 10 per cent of the full steam flow was permitted to pass. At 20 per cent of valve opening, corresponding to a full turn of the valve wheel, the proportions of full steam flow passed by the respective valves were about 90 and 20 per cent; at 30 per cent, 95 and 30 per cent; at 40 per cent, approximately 96 and 40 per cent. Maximum steam flow was only at-

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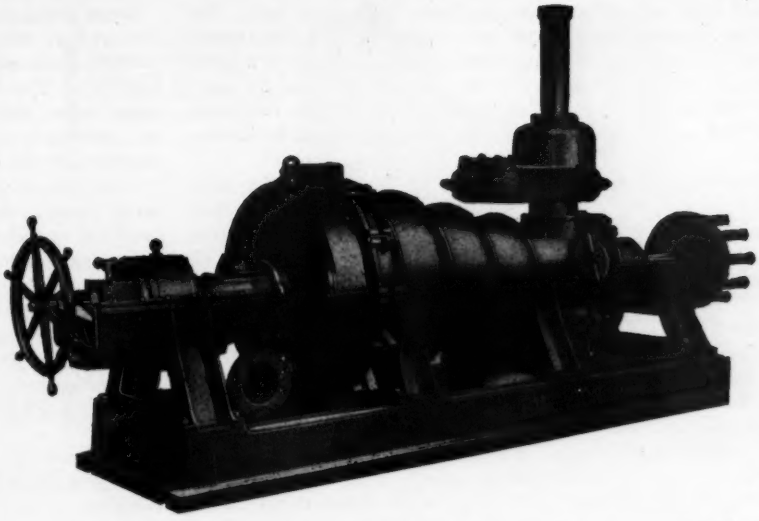

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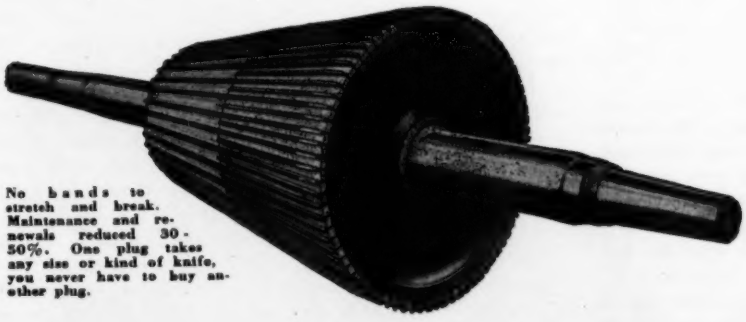

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tained with both valves when they were fully open, but in the case of the deep cone disc type unit, comparable to a large needle valve, the proportion of steam flow passed varied almost directly with the proportional opening of the valve, so that when the valve was half open, for example, the steam flow passed was just about half that at full opening; at three-quarters opening, three-fourths, etc.

The foregoing test, which also included experimentation with other types of valves, was conducted in connection with the selection of a valve for throttling service control of a heating process previously entailing the consumption of some 27,000 pounds of steam an hour. The substitution of the deep cone disc type valve for the one which provided so much less sensitive control effected a reduction in steam consumption by the process of 9,000 pounds per hour, equivalent to a daily saving of between $50 and $60.

Warpage of valve seats, with the faults in valve service it may precipitate, is common to swing-gate check valves, entailing constructions quite similar to those resorted to in the cases of globe and angle valves. It is less prevalent with horizontal type check valves and can be avoided almost entirely in vertical type check valves. As symmetrical a distribution of metal in both transverse and longitudinal planes as possible is entailed and the realization, so far as feasible, of surface contact between disc and valve seat.

The problem of producing an efficient and serviceable gate valve is much simpler, so far as the avoidance of seat warpage difficulties is concerned, for such valves can be made symmetrical in respect to the distribution of metal in both transverse and longitudinal planes. The inclination, or slope, of the valve seats is customarily slight and as there are no bridge walls or partitions to exert unbalanced stresses during the expansion and contraction occasioned by variations in temperature the liability of any serious valve seat warpage or deformation is very slight.

High Pressure Valves and Valve Specialties

With the introduction of boiler steam pressures of 1,000 pounds per square inch and upward, almost twice as high as this in the case of one mill, the valve requirements for satisfactory valve service have been intensified rather than altered in any way. Valve metals suitable for the stiffest service yet attempted are available and the mechanical modifications which have been found necessary are more in the nature of exercising greater skill in design and of better distribution of metal, greater attention having to be paid to the symmetrical balance of the valves to minimize distortion under temperature changes and to strengthen the valves. Valve-stem stuffing boxes and packings have had to be improved to control leakage and numerous improvements have been effected in so-termed valve specialties. Some of these can well be featured, together with certain modifications in valve services and applications which have been found advisable.

For instance, the feeding of high-pressure boilers with feed-water regulators has presented some complications, difficulties in handling the regulating valves in instances where high differential pressures have been entailed. It has been found in some cases that instead of using a single large valve, better results are secured with several smaller valves arranged in parallel, the latter being much more easily controlled. An extension to the valve disc provided for the purpose of throttling the flow of water while the main disc is rising from its seat has also been successful in minimizing wire drawing and erosion of the main valve stem, though of necessity somewhat increasing the required lift of valve.

Materially influencing the duty imposed upon the valves is the fact that feed-water regulation is actually more effective and satisfactory on boilers operating at pressures in excess of 1,000 pounds than on those operating at lower pressures. The density of the steam and water are more nearly on a par, as are also the temperatures of the steam and feed, so that the introduction of the feed-water does not as seriously disturb the operation of the boiler.

Steam pressures of 1,000 pounds and higher have introduced no very radical difficulties in respect to safety-valve construction, though certain quite marked modifications in design have proved expedient. This is aptly exemplified in the case of superheater safety valves, which should be particularly pertinent. Such valves are customarily set to blow before those on the boiler proper and, consequently, are saddled with most of the relief work.

Under the extreme temperatures at which superheaters operate, safety valves with their springs mounted close to the valve body are liable to open at a lower pressure after each successive blow, the springs heating up and gradually losing their resilience. To overcome this fault, which seriously aggravates steam waste, an approved design of superheater safety valve has been developed in which the valve spring is removed from close proximity to the valve body by the interposition of an open spool shaped section, such section providing minimum metal for heat conduction and as much surface for air cooling as is consistent with adequate strength.

It is stated that the spring of such a valve subjected to a pressure of 665 pounds and a temperature of 720 degrees Fahrenheit remained so cool that the working coils of the spring could be handled without discomfort, although the valve body and spool section became highly heated. After a long succession of "pops," the closing pressure did not vary a single pound from that of the first blow.

A blowdown of 4 per cent, equivalent to a 40 pound blowdown at 1,000 pound pressure, is held desirable for the best operating practice even at these high temperatures, making it generally necessary to reduce the frequency of safety-valve blowing, practice which is found permissible by reason of the fact that the high-pressure plants employ distilled makeup water exclusively. The infrequency of blows is controlled in diverse ways, by the use of small pilot valves, special combustion controls, auxiliary relief valves, etc.

No marked changes have been made in the design of blow-off valves to meet such operating conditions, however, but some exceedingly interesting new blow-off valves have been evolved, designed particularly for high pressure service. One of these is a tandem type of valve embodying a rotary gate valve of the plug cock variety and a double-seated angle valve arranged so that one disc is drawn completely out of the water flow before the other is raised from its seat, the complete valve mechanism being housed in a single forged steel body.

The operation of this particular valve is most ingenious. The rotary gate plug valve section, which is mounted next to the boiler, is controlled by a lever mechanism, while the double-seated angle valve is controlled by an outside stem hand wheel. When not actually functioning, all valve ports are shut, the control lever of the rotary gate valve in a depressed position with the valve plug cock in shut position and the double-seated angle valve firmly seated. To operate the valve, the first step is to unlock and push the plug cock off its seat by raising the rotary gate valve lever to a vertical position. Then, by swinging the control lever into a horizontal position the plug cock is revolved 90 degrees and a clear passage through the rotary gate valve is opened. The hand wheel is then backed off sufficiently to raise the upper of the two angle valve discs, opening a by-pass which effects an equalization of pressure on a sealing ring, or disc, which protects the main valve. Further backing off of the hand wheel lifts the sealing disc from its seat, so that neither the disc nor its seat will be subject to erosion when flow commences. Complete backing off, opening of valve, by the hand wheel raises the lower valve disc and lifts it out of the current of flow of sludge and water discharged at high velocity the instant the valve is opened. Closing the valve simply entails a reversal of this cycle of operations.

Another compound blow-off valve arrangement, which is reported to give excellent service, consists of the familiar lever, cut-

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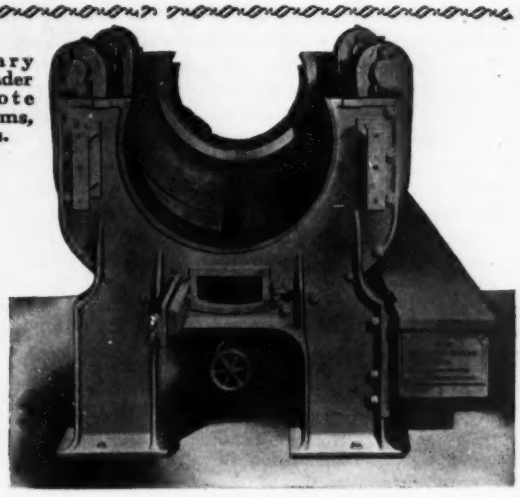
View of Rotary Screen with cylinder removed. Note divided diaphragms, large openings.



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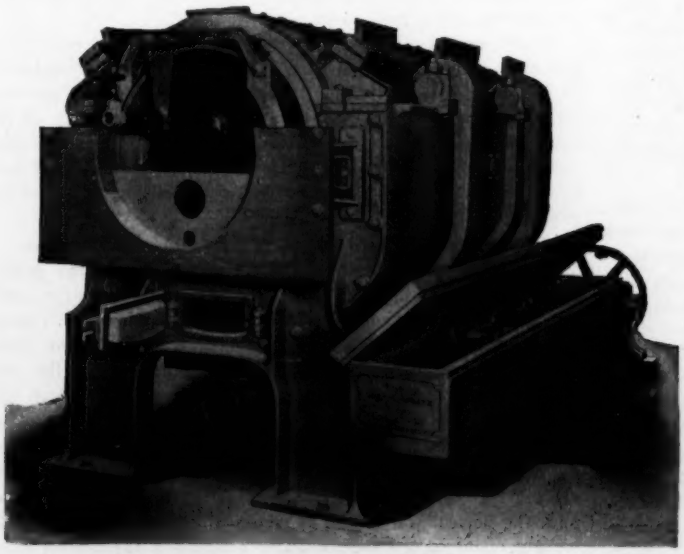

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off type of blow-off valve mounted next to the boiler and attached to a companion angle type valve of somewhat special construction. The flat surface contract valve seat principle is employed for the angle valve, a sealing ring of flexible construction, or form, carried loosely being interposed between the valve seat and what serves as a disc holder, or, as it is termed, the constrictor guide of the angle valve. This disc functions as a guide, for as it seats it is directed to normal contact by a cylindrical wall projecting up from the flat valve seat. As the constrictor guide valve holder enters such valve seat well, the flow of sludge and solids entrained in the water is arrested, though a certain limited flow of clear water continues until the sealing ring contacts firmly with the valve seat and the valve is closed, thus effectively flushing the seat face. The flexible sealing ring under the pressure incidental to closing the valve tightly conforms to any slight irregularities of valve seat surface occasioned by warpage produced by variations in temperature and the necessarily unbalanced metal distribution, so effecting positive surface contact and seal.

The outlet port of this distinctive valve is of somewhat peculiar form, being circular at the valve seat and gradually assuming a hexagonal shape as it approaches the valve outlet. To withstand the impingement of the current of sludge and water discharged at high velocity when the valve opens, an extra wall thickness is provided opposite the valve inlet, also prolonging the life of the valve. Another constructional detail that makes for low depreciation is that the sealing ring seats well back from the edge of the port and out of the path of the discharged sludge and entrained solids, preserving the face of the sealing contact surface when the valve is open.

Multiport Back Pressure Valve

Back pressure valves also being highly important devices in the operation of modern pulp and paper mills, attention may well be directed to development in multiport back pressure valves, for the sensitive adjustment of back pressures to conform with process steam requirements exerts considerable influence on production costs. The use of several discs rather than one large disc, as in the case of ordinary back pressure valves, effects a number of improvements in close pressure control which all serve to conserve steam and maintain a better heat balance.

In the first place, the use of several small valve discs avoids the shock, noise and wear incidental to the hammering of a large valve disc upon its seat. The rise of the disc and the force with which it strikes its seat vary proportionally with the projected area of the disc, so that with the arrangement of a number of small ports and dics of equal diameter the individual discs not only rise less but seat with less impact shock than one larger disc, in the discharge of equivalent service. When cushioning of valves is resorted to, as is customary, the control of the smaller discs is not only much more easily effected but the closing of the ports effected more expeditiously, conserving steam and effecting more sensitive control.

In approved types of these multiport back pressure valves, the individual small valves, enclosed in the comparatively large embracing valve casing, or body, are spring loaded, backed against a common adjustable pressure plate, so that as this plate is moved one way or the other the compression of the disc springs is collectively increased or decreased. No parts directly connected to these discs extend outside of the valve casing, so there is no liability of rod jamming, as when the valve rods pass through stuffing boxes which might be screwed down too tight; of tying down the valves or overloading them; or of obstructing free valve movement by external interference. The degree of back pressure is easily and sensitively adjusted from no pressure, with the discs lifted from their seats for free exhaust, to the maximum fixed by the spring complement in service. This maximum, incidentally, is also adjustable by the substitution of stiffer or weaker valve springs.

The ease with which the back pressure can be adjusted over as wide a range as conditions require invariably proves conducive to much improvement in steam economy. No arduous duty is imposed on the engineer and he takes advantage of the marked facility for reducing the steam consumption of engines, turbines, etc., at those times when the demands for exhaust steam are low and little or no back pressure is required.

Controls and Regulators

The questions pertaining to the use of controls and regulators, the operation of which entails the employment of numerous valves, both special and of standard types, while indispensable to the modern mill, are altogether too complicated and involved to be disposed of in a few words. Virtually every kind of approved automatic control and regulator has been adapted to pulp and paper mill services, in process work of all descriptions and in many operations in both mill and power plant, for regulating the supply of all operating mediums, and for governing temperatures, pressures and various movements. Their use tends, obviously, to higher operating efficiencies, greater economies and savings all along the line.

While space does not permit even meager descriptions of the most generally required of these valuable devices, the simple mention of a few may serve to indicate how wide a range of operations can now be controlled by automatic and semi-automatic means. In making such a presentation, however, no attempt will be made to define more than the functions of a few such devices selected more or less at random, to illustrate principles of control and regulation rather than specific examples.

A pressure control of a dual motor type, step action regulator, for instance, is very desirable for the operation of at least two different valves from a single regulator unit, each valve controlling the flow of steam from an independent source of supply. In maintaining a constant supply of low pressure steam, to illustrate, one valve might control the exhaust steam supply and the other a supply of higher pressure steam from some other source. As long as there was sufficient exhaust steam to maintain the desired pressure, the entire control would be exercised by the step action motor operating the control valve in the exhaust steam line, the second motor being inoperative for the time and the valve connected to the higher steam pressure line closed. The instant the desired pressure could not be maintained from the exhaust steam line, however, the second motor would go into service and the required amount of higher pressure steam to make up the deficiency admitted by the second valve.

A very similar single motor, step action regulator, controlling temperature instead of pressure, is desirable for close regulation of the heating steam supplied to storage heaters, heating systems, etc. A thermostatic element would simply take the place of the pressure diaphragm valve assemblage actuating the pressure control previously mentioned, providing a positive and powerful control for operating the valves governing the supply of steam for heating service.

Ingenious boiler feed-water regulators function efficiently in maintaining a fixed water level in the boiler, employing neither floats nor thermostats. In one such device, the regulator unit, attached to the boiler much like the familiar tubular water gage, is connected by a small tube to the operating diaphragm motor of a feed water control valve. The regulator end of the connecting tube is open and extends down into the regulator unit to a point at or a little below the boiler water level. When the water level in the boiler drops below normal the open end of the connecting tube is unsealed and the boiler pressure is utilized to operate the feed-water control valve, admitting feed to the boiler until the normal water level is regained and the tube linking the regulator and valve is again water sealed and the control valve closes.

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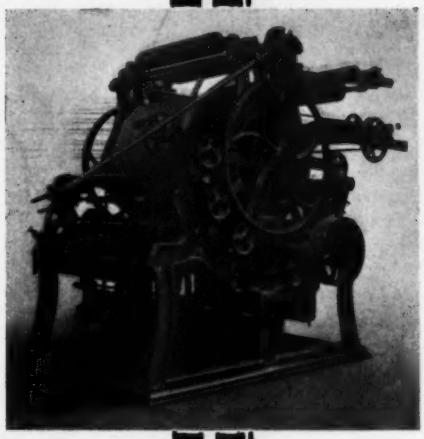

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Hydraulically operated power motors have also been adapted to the important service of controlling the supply of feed-water to deaerators and to similar services, by relaying the power for the operation of large float valves. The same device has been used to marked advantage for maintaining a constant level of paper stock supply.

While the foregoing does not serve even to introduce the topic of automatic control equipment adequately, it may suffice to give some indication of the diverse lines of controls and regulators now available to the mill seeking the marked economies to be gained by the elimination of the human element in the matter of control and entrusting the responsibility of cost saving and delicate regulation to such mechanical aids. Marked economies are possible by efficient automatic draining of the drying rolls of paper machines, to cite one of many possibilities, as has recently been conclusively demonstrated at the Powell River Company, Ltd., Powell River, B. C.

A great deal can also be done in the matter of automatic pressure regulation on digesters, for the proper and sensitive control of the pressure on such equipment effects a more uniform product, produced more expeditiously and with more efficient utilization of the steam consumed in the cook. Instead of using the cumbersome, damper regulator type of pressure reducing valve, as was formerly employed extensively, it is now possible to make use of compact, auxiliary controlled, pressure regulators suitably trimmed to withstand possible corrosive action of acids and other chemicals. These controls are said to provide much closer regulation and to meet successfully the duties imposed by widely fluctuating and variable steam loads. It is even claimed that they will maintain a steady reduced pressure even if the pressure of the actuating steam supply drops to little more than that carried on the low side of the regulator.

Opportunities also abound in most paper mills for the more efficient float controlling equipment, to maintain liquid levels within narrow limits. The closer liquid levels can be maintained, the better will be the quality of paper produced and the smaller the quantity of water and other liquids consumed. By means of pilot control and specially designed valves, equipment has been developed by which the level of water carrying finely divided wood pulp in suspension can be held substantially constant, irrespective of the draw-off.

The mill striving for reductions in production costs should most certainly look to the possibilities and economies of employing efficient differential pump governors for boiler feed pumps, pressure regulators for the heating system, efficient controls and regulators for all steam lines, vacuum regulators for exhaust pumps, back pressure and atmospheric relief valves for feed water heaters and condensers, etc. Discussions on these various matters will appear from time to time in these columns, but the mills which will take the initiative and instigate investigations of their own will be handsomely repaid.

Warren Parchment Co. Settlement

[FROM OUR REGULAR CORRESPONDENT]

DEXTER, N. Y., February 1, 1930.—Settlement of claims of creditors of the Warren Parchment Company may be compromised this week when the adjourned meeting is called at the office of Judge John Conboy, referee in bankruptcy. If this is brought about the creditors will receive a certain amount on each dollar or their claims and the company will be permitted to retain its property and business. Attorney Francis E. Cullen, representing the firm, is now in Washington relative to unpaid income taxes claimed by the government which are now in dispute. The company has unsecured credits of over $202,000 and secured claims of about $61,000. In the case settlement is not made a trustee will be appointed and the assets liquidated.

Bryant Paper Co. Makes Good Report

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., February 3, 1930.—Gratifying improvement in business at the Bryant Paper Company is indicated in the 1929 report just issued by Felix Pagenstecher, president. Profits for the past year before Federal income tax are $193,321.54. Of this amount, $120,893.49 is credited to the fourth quarter. There was a loss of $15,125.81 for the first quarter.

The condensed statement shows assets of $9,285,350.53. Current assets are $2,999,022.06 as against $500,104.11 quick liabilities, a ratio of approximately 6 to 1. Bryant Paper owns capital stock in other concerns valued at $1,260,500. Buildings, machinery and equipment (after depreciation) are valued at $4,679,204.65. There is a bonded indebtedness outstanding of $2,028,200.

In his report to the stockholders, President Pagenstecher says: "We are pleased to report to the stockholders that the plant and organization of the Bryant Paper Company are in better condition today than they have been at any time during the past ten years. The program which was inaugurated in 1922 is being carried forward, and the improvements that we have made are unquestionably proving their worth. In 1922 the necessity for these improvements was apparent to the directors of your company and you authorized a bond issue of $5,000,000 at that time. Since then we have expended $3,630,776.46 for permanent improvements and have issued a total of $2,500,000 of the bonds. This means that we have taken $1,130,776.40 from the current funds of the business for improvements."

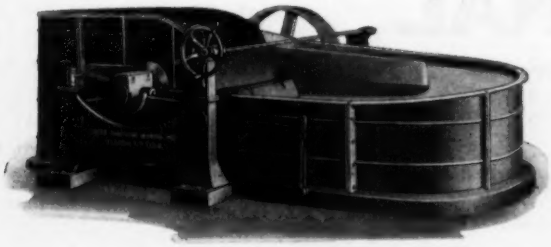
The report shows that of the bonds issued to date, $471,800 have been retired. Attention is also called to the fact that the improvements authorized have called for the best engineering skill and have been carried forward without any serious interruptions in the operation of the plants.

"If, in 1922," the report adds, "we had failed to adopt the improvement program and continued to pay dividends from our surplus, we would in a few years, have found ourselves in possession of an obsolete plant, with a poor earning record and a financial statement that would have made financing for improvements either very difficult or altogether impossible. Today, we have instead of that kind of a situation, a very much improved plant that is capable of earning, even under the difficult market conditions that have existed during the past two years.

"In a way it was unfortunate that this company was able to make profits with antiquated equipment for several years prior to and during the war, because it delayed making some of the improvements that could have been made at that time for about one-half the present cost.

"If the paper industry had continued on the basis of the years 1923, 1924, 1925 and 1926 we could have continued with the improvements and the dividends also, but unfortunately such was not the case and, in consequence, it was more necessary than ever to continue in our efforts to improve the plant for the purpose of reducing costs. Your board of directors had no alternative in choosing between a course that would temporarily interrupt the payment of dividends against one that made the possibility of any earnings in the future remote or impossible. Your plant is rapidly reaching a point of efficiency where it will compare favorably with those of its best competitors, and, as they are making a reasonable return on their invested capital at the present time, there is no reason why we cannot soon accomplish the same result."

President Pagenstecher calls special attention to the company's adoption of a bonus wage system and new cost system, both money makers and money savers. Work is also progressing rapidly on the rebuilding of the company's No. 10 machine, doubling its capacity, also with the erection and equipment of a modern finishing room. The cost of those two items will be about $750,000. The outlook for good business in 1930 is believed to be excellent.



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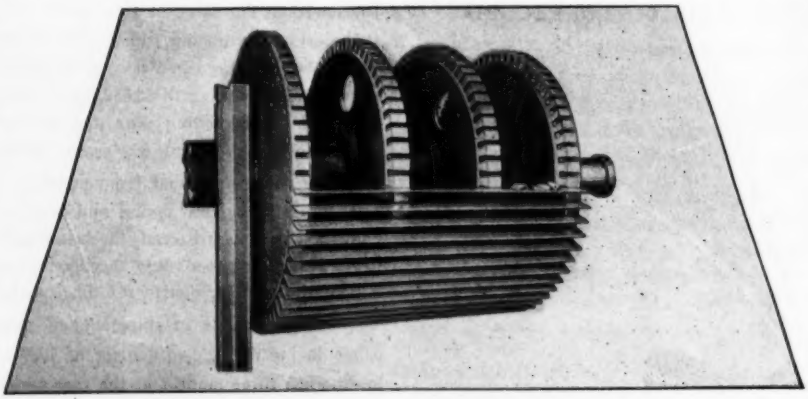

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FULTON, N. Y.

"Your Paper Is Made In Your Beaters"

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Shipments of papeteries during the first six months of the year also showed a tendency to fall off, but a marked improvement during the succeeding six months brought the total for the year up to 855,000 pounds, an increase of 14 per cent over 1928. Shipments of envelopes, on the other hand, were slightly under those of the latter year, although at the same time an increase of 6 per cent was registered in the value of this article.

Exports of wrapping paper were the highest of any year since 1920, when they reached a total of 61,264,500 pounds. The 1929 shipments, amounting to 43,882,700 pounds, were 20 per cent above those of the preceding year and 50 per cent above the annual average of the preceding five years. While shipments of this class have fluctuated somewhat from month to month with a noticeable slackening during the spring and summer months, they show an unmistakable upward trend, the last quarter's shipments exceeding those of the corresponding three months in 1928 by 20 per cent and of the opening quarter of the year by 10 per cent.

A heavy decrease in shipments of greasproof and waterproof paper during the second quarter of 1929 and to a less extent during the last three months of the year caused the total shipments to fall 6 per cent under those recorded for the previous year. This decrease, however, would seem to have been registered in the less expensive grades, since the total value of the shipments during 1929 shows a gain of 7 per cent compared with those of 1928.

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Exports of boards during 1929 continued to show the slow but steady gain which has marked these shipments during the past few years. Proportionately the largest increase occurred in shipments of bristols, which rose by 929,000 pounds, or 45 per cent. The bulk of the shipments in this line, however, consists of boxboards and other paper boards and strawboards, the former during the past year reaching a total of 53,458,600 pounds and the latter 47,315,400 pounds, representing increases of 10 to 14 per cent respectively over 1928. Exports of vulcanized fiber, which closely approaches these two classes in the value of the aggregate shipments, also increased during the past year—in volume of shipments, by 16 per cent and in value by 2 per cent.

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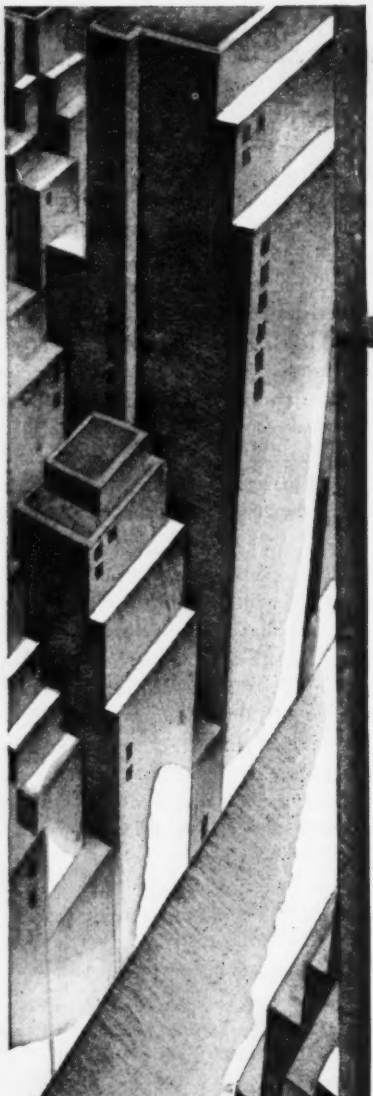

Great Structures Rest on Strong Foundations

By CARL R. MILLER

No. 1 in a series of advertisements describing the position of The Mathieson Alkali Works in the Chemical Industry

IT'S an axiom almost as old as civilization..."Great Structures Rest on Strong Foundations".

The foundation stones upon which Mathieson has built a far-reaching business structure likewise rest on firmest bedrock. They symbolize three great factors in modern business...three great tenets that are basic and enduring: Resources...Research ...Service.

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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Scandinavian Sulphite Manufacture

By John F. Ohlson[1]

Of the three Scandinavian countries, Finland leads with 73 per cent of its land or approximately 100,000 square miles covered with forests. Sweden has slightly less or 57 per cent of its area while Norway which is for the greater part mountainous has 23 per cent or about 28,000 square miles of timber land. Of this land, 16 per cent in Norway to 37 per cent in Finland is state owned, limited companies own about 30 per cent and the remainder is in the hands of small and large land owners.

Contrary to conditions in the United States and Canada, there is only one specie of spruce, picea excelsa, and one specie of pine, pinus sylvestris, grown in the Scandinavian countries. The spruce resembles our black spruce, picea mariana, although the Scandinavian spruce is of little larger diameter. The Scandinavian pine resembles our jack pine, pinus Banksiana, in appearance. Norway has about 50 per cent spruce and 30 per cent pine, Sweden has 42 per cent spruce and 41 per cent pine, while Finland has 40 per cent spruce and only 26 per cent pine; the remainder being mostly birch and beech. Even in these relatively small countries there is a considerable difference in the specific gravity, tree growth, etc. between the wood grown, because of different climatic and geologic conditions. The spruce varies from about 18 annual rings per inch and about .35 specific gravity in southern Finland to about 43 rings per inch and a specific gravity of .55 in the north from where much wood is at present being shipped from Archangel to German mills. It might be of interest to note that the German mills now using Russian wood from the Archangel district are especially pleased with this hard uniform wood, particularly for ground wood pulp. The average age for Scandinavian pulp wood runs from 50 years in the south to about 150 years further north.

The growth of the Scandinavian pulp industry has been along rational lines, it being part of the government policy to keep the growth of the industry in line with the annual forest growth. In Sweden it is estimated that the annual increment (inside bark) is about 45,700,000 cubic meters and that at present, authorities seems to believe that the growth somewhat exceeds the consumption. This is also true of Finland, perhaps even to a greater extent. But in Sweden, as soon as all the forests are in an unsatisfactory condition, overripe, crowded, etc. the present estimated supply of 1,675 million cubic meters will be brought well over the 2,000 million cubic meter mark. Finland's estimated supply is slightly less, the present consumption is about 44,000,000 cubic meters, a great percentage of this wood being exported, a fact which is causing much consternation in Finland and which will probably end in having the export of pulp wood prohibited. This export of pulp wood is not only a direct loss to the country but has increased the price 10 to 15 per cent the past few years.

[1] Associate member TAPPI, New Brunswick International Paper Co., Dalhousie, N. B.

The sulphite industry, in Sweden especially, has been rather quiet during the past few years but lately, due to the demand for viscose pulp, the increase in manufacture of greaseproof paper and the increased newsprint consumption, many mills have installed new digesters and have increased their capacity. On the other hand the sulphite industry in Sweden has expanded rapidly, in fact, so fast that it is taken with alarm as the expected production of 650,000 tons in 1929 will exceed the 1926 production by over 50 per cent. The Kreuger and Toll interests are planning a new sulphate mill of 60,000 tons. But by far the greater percentage of wood used will be from sawmill refuse which exists in enormous quantities and which before the advent of the sulphate mills created a serious nuisance. Authorities say that only 55 per cent of the log is utilized as first grade timber, the remainder being made into charcoal or used as fuel direct. In Finland, Enso-Gutzeit, O. Y. partly state owned, have now well under way a sulphate mill of 60,000 tons capacity, to use sawmill waste almost exclusively. And at Kexholm, Finland, beside a large lake which lies partly in Russia, the famous Waldhof company is building a sulphite mill using Russian pulpwood with a future capacity of 100,000 tons of sulphite, presumably viscose pulp. In addition to this another sulphite mill is expected to go in operation very shortly. The ground wood mills in the Scandinavian countries are of course suffering from overproduction in Canada and because of the loss of a part of their English market. Lately one of the larger concerns manufacturing ground wood has closed down its mills.

Reforestation

Of the reforestation policy of Sweden much has been said and it is wholeheartedly carried out by every one concerned. It is essentially a plan of continually thinning out and replanting. At no place is the woods laid bare, this fact is especially adhered to because in some places the young trees will not thrive without the protecton of the older ones. Another reason for reforestation, of vital importance is the fact that the greater part of the forest area is absolutely unsuited for any other purpose due to its exceedingly rocky nature and the rigorous climate of the country. In scientifically controlled forests the spruce wood is not allowed to grow more than eight inches in diameter, pine grows larger, especially if it is used for lumber. The thinning out is done once every ten years and this is economically possible because a great percentage of the small wood is used as charcoal in the iron and steel industry and there is a considerable demand for small dimensioned timber for mine props. The reforestation policy in Finland, while not having reached the high degree of perfection as in Sweden, is conducted along the right lines and it is only a matter of time before all forests in Finland will be under scientific control. The excellent

forestry school in Stockholm is symbolic of the high degree to which reforestation and scientific control is carried out.

One of the greatest advantages the pulp industry of Sweden enjoys is the ideal logging and floating conditions. Numerous rivers along the entire Gulf of Bothnia penetrate far into the highlands in the interior where the huge timber reserves are and at the mouths of these rivers lie the pulp mills from which the pulp is shipped direct to the foreign ports. In Finland where there are numerous lakes, the logging operations are much more expensive. The seasonal nature of logging presents no labor difficulty in the Scandinavian countries because the lumberjacks are engaged in farming pursuits during the other months of the year, the crews even bringing their own teams with them. It sometimes happens that the wood is taken from the northern forests to be processed in mills further south and in this case the timber is tied in huge booms and towed in the Gulf of Bothnia by boats which are used as ice breakers in the winter time. Sinkage losses never exceed 2 per cent and in some rivers it is less than 1 per cent. It is interesting to note that it has now become almost universal practice to have all the wood completely barked in the forests, thus eliminating the serious bark nuisance at the mill and the sulphite mills using sawmill waste are thus assured of a much cleaner raw material.

Wood Costs

The price paid for pulp wood in the Scandinavian countries naturally varies considerably, depending upon logging conditions, from whom bought and to where it is floated. In Finland, the price paid for spruce ranges from 100 to 120 finmark per cubic meter of barked wood, or about $10 per cord while pine for pulp wood sells for 80 to 85 finmark per cubic meter. In Sweden the price varies from 35 to 50 öre per cubic foot or slightly less than $10 per cord for barked spruce wood, and pine wood runs around 25 öre per cubic foot. In Norway, taxation, labor and materials are higher than in Sweden and spruce wood costs nearly $12 per cord. Of comparative interest is the price paid for spruce wood by some German mills, $16 to $17 per cord, barked, and in Czechoslovakia the price for spruce wood is about $14 per cord barked. All these prices are for wood delivered to the mill. The sulphate mills of Finland pay for saw mill waste, chipped and delivered 15 to 25 finmark per cubic meter of chips or about fifty cents per cubic meter while in Sweden the price varies from two to three krona per cubic meter of chips or about 65 cents per cubic meter. It is estimated that only 55 per cent of the wood sawed into lumber is used as first grade material, the remainder has been used as fuel or even thrown away.

Wood Handling

With the possible exception of one or two ground wood mills, all Scandinavian pulp mills pile up their wood in a neat arrangement by means of some overhead crane or cable system. There is either a large crane or cable running over the entire pile and with this system one end of the crane extends over the water while the other end is located at the barking house, or there are the smaller cranes running on tracks between the piles. One mill reported less than one per cent rottage of wood in piling and in no mill was there evidence of wood rotting in storage. With some of these systems 4 to 6 men can handle the entire piling or delivering of logs for a mill consuming 100,000 cords yearly. Other advantages of this neat piling of the wood in stacks are, a uniform moisture content in the wood, the possibility of inventory taking and the piling of wood from various districts in separate piles.

As has been mentioned before all wood is now being forest barked, but nearly all mills rebark the wood with knife barkers, the refuse being burned; so that each log is skinned again before entering the chippers. There are a great many diffrent makes of knife barkers being used, those from the Scandinavian countries, from the U. S. A. and Germany, each claiming lowest bark losses, but from inquiry of mill operators, a well run knife barker has losses of about ten per cent. Elaborate conveyor systems are necessary and one well known mill has now an automatic system where one man sitting with his controls watches over 4 to 6 machines, this is of course, a very expensive installation. Despite the fact that most of the wood comes by water and is thus very adaptable to drum barkers and especially the Thorne barker, the author encountered only one drum barker in thirty or so mills visited.

Chip Handling

The four knife chipper is preferred to the three and in all new installations the chips are conveyed to the chip bins by a blower system. One of the more progressive mills has installed a weighing device for the chips, thus fullfilling a long desired need. The chips were screened in gyratory, shaker and rotating screens of many forms and makes. Of devices for filling the digester with chips there are now three forms on the market, two utilizing steam to give the chips a swirling motion to the outside of the digester and the third using air. In all cases these devices increased the output per digester, although there were some mills which for one reason or another had discarded the chip filling device.

The sulphite industry is the old established one of Sweden. Its strong unbleached sulphite has long been well known the world over. This pulp was formerly all made by the indirect process but in the past few years a polemic has been raging as to whether it is not possible to produce a strong pulp by the slow direct and it seems that little by little the mills are removing their coils in the digester until at present only about 60 per cent of the sulphite pulp cooked is made by the more expensive indirect process. In Finland and Norway there are only a few digesters being run indirect. The actual cooking time still ranges around 16 to 17 hours while the total time runs up to 22 to 24 hours depending upon whether the chips are steamed before adding the cooking acid and whether the waste liquor for alcohol recovery is drained from the digester near the end and how the digester is dumped. For the viscose pulp and newsprint there is a shorter cooking time, but in no mill was the cooking time less than 13 hours and in some mills there were additional digesters being installed, not so much to increase production but to improve the quality by longer cooking. Finland and Norway run on a shorter cooking time than Sweden. The maximum temperature, rarely, except for viscose, exceeds 135 deg. C., being between 130 and 135 while the maximum digester pressure varies between 4 and 5 atmospheres, about 70 pounds pressure. The production per cubic meter of digester space varies between 75 and 105 kilograms of screened pulp and the consumption of wood ranges between 7 and 9 cubic meters or about 2.2 cords of barked wood per a.d. metric ton, the figures varying depending upon whether a chip filling device was used and on the pulp cooked and the method used.

Acid Making

The acid used is almost without exception made from a non-magnesium stone. The total SO_3 varies from 4 to 5 per cent with 4.50 being the average while the combined ranges from 1.00 to 1.35, about 1.10 being the average. But with the employment of direct cooking the acid used is being strengthened and for this purpose the old high wooden acid towers which are all run parallel are being replaced by concrete towers run in series. The chamber process has also been used to a great extent in Sweden but this also is being replaced by concrete towers run in series. For production of the SO_2 gas, iron pyrites is extensively used because many mills own their source of supply, although sulphur burners are almost always at hand in addition. To increase burning area and to aid in a better mixing of the gases, the latest sulphur burners are provided with an especially constructed inner cylinder. These new burners are now in operation with much success producing stronger and better gas. The rotating ovens are all enclosed in a brick compartment, thereby making possible the use of the hot air formed for the further combustion of the sulphur gases in the combustion chamber.

The use of acid proof steel is making rapid progress in the sulphite industry, especially for digester fittings, valves throats, etc. and one mill is even using acid proof steel pipes for the acid lines; its lower installation cost and longer life is partially offsetting the high initial cost of acid proof steel. The past year has seen the successful introduction of a circulation system for sulphite digesters, a simple and yet efficient method whereby the acid is circulated within the digester, thus eliminating the troubles encountered with a circulating system having parts outside the digester. The dump valves are all gate valves, used even when the digester is blown under pressure, operated automatically with water pressure.

Pulp Preparation

The greater percentage of blow pits were fitted with elaborate mechanical emptying devices but these often required more men to empty the pits than in washing out the pulp. Other disadvantages were the high upkeep of the machinery which deteriorates rapidly due to the SO_2 gases from the pulp and then the pulp is very dirty which can be expected in large open pits. There is just now being used in some mills an automatic washing out system made of acid proof steel, that is working satisfactorily. The pits are closed and only one man is required to take care of five blow pits.

The tendency for wet machines is to have high pressure presses from which the pulp leaves at over 50 per cent a.d. to be either further dried or used in the wet condition. The press rolls have patented grooves on the surfaces, the usual pressure on the first roll being about ten tons on each journal and about twenty-six on the second press. The machine is a very efficient water remover, the number of drying cylinders being reduced from 32 to 14. In place of suction boxes on the fourdrinier part, one or more suction rolls are being used with great success, especially for pulp.

A thing which is almost universal with all sulphite mills in the Scandinavian countries is the use of Ruths steam accumulators. In mills which have such a varying steam consumption as a sulphite mill, a Ruths steam accumulator is an indispensable item to economic operation and wherever they have been installed they have met with instant approval.

Nearly all the Swedish sulphite mills are equipped with an alcohol recovery plant, utilizing the waste liquor, but because of the high taxation and the bothersome government control system, only about 17 million liters of 50 per cent ethyl alcohol will be produced in 1930 as against a capacity for producing 40 million liters yearly. And most of these mills now making alcohol do so without any profit, they are only running so as to be able to pay off depreciation and amortization costs on the equipment that they already have on hand. Over two thirds of the alcohol is redistilled to over 99 per cent and used mixed as motor fuel.

Labor

Labor conditions in the Scandinavian countries are in general very good. Illiteracy among the workmen, especially in Sweden is very low and the radical or communistic element plays a very small part, especially as compared with other parts of Europe. According to Swedish government statistics, the average hourly wage in 1928 paid to labor in the electric, mechanical and other trades amounted to 1.22 kronas or approximately 33 cents, this is perhaps the highest wage paid in any country in Europe. The Swedish pulp mills are divided into special classes according to location, etc., so that a workman would not receive the same wage in one mill as in another mill, even though he would be doing the same work. This wage scale is fixed so that a man doing a certain job knows exactly what he is to get and is the result of an agreement between the government, the workmen and the mill owners. In sulphite mills in northern Sweden unskilled labor receives about 22 cents per hour while digester cooks get about 36 cents with bonus included. This bonus system is in universal practice and is figured on a production basis. In central Sweden wages are slightly higher, a machine tender gets 42 cents per hour, bonus included. In Finland, due to the low exchange value of the Finnish mark, 2.52 cents, the workmen receive relatively low wages, unskilled labor begins at 4 marks per hour or about 1 cent to about 8 marks for skilled labor. A sulphite cook, bonus included, would receive from 9 to 10 marks or approximately 25 cents. In one of these sulphite mills the average wage paid, bonus included, for the entire mill was 6.95 marks or 17½ cents. Most mills in Finland employ women labor, up to 30 per cent total labor and the wages paid them average from 3 to 4 marks or approximately 8 cents per hour, but it is without doubt that these tasks assigned to the women labor were done just as efficiently as men did the work. Of comparative interest is the wages paid in Germany, to pulp and paper employees. Skilled labor gets 80 pfennig or 19 cents per hour with a weekly wage of 40 marks or $9.52, but in those mills under the bonus system the wages paid are from 5 to 10 marks higher per week. In Czechoslovakia the wages paid average around 10 cents per hour.

Nearly all the better mills in both Sweden and Finland have built cottages for the greater part of their workingmen. In addition each workman has a small garden and pays out of his wages the rental due the company for the living quarters. For recreation, an athletic field is always provided as well as a theatre used for all public gatherings. And it is in this manner that the Scandinavian countries have kept their workmen contented while in other parts of Europe there is constant friction between the employees and employers and the living conditions are considerably poorer than in Sweden, Norway or Finland.

In conclusion, it might be opportune to state that the future for the pulp and paper industry in the Scandinavian countries looks very bright. The industry is financially sound, labor conditions are favorable and a sufficient wood supply is assured. While the introduction of foreign capital is not so great as might be expected in Sweden due to the severity of its laws, Finland offers exceptional opportunities, not only financially but in fact that it offers excellent possibilities for expansion. Not only is the famous German pulp and paper company, Waldhof, building a huge sulphite mill but the Bachus Brooks interests and the Insulite Co., are considering building a large plant in Finland to manufacture insulating board.

Hard Cockles in Loft Dried Paper

SPECIAL INQUIRY No. 143

A member writes: "We are having trouble with hard cockles in loft dried papers and wish that you would submit this question to the members of the Technical Association and other papermakers who may be interested, to see if they can help us.

"These cockles appear in loft dried bonds of 50 per cent rag furnish and 50 per cent sulphite, and also in loft dried bonds containing 25 per cent soda and 75 per cent sulphite. These bonds are made on a machine that has graduated drying, the stock is not too slow, the presses are in good shape, the drawers are not too tight and the paper is well sized before going into the tub size, which is glue. The papers are dried by the old fashioned method of loft dryng and then sheet calendered.

"These same hard cockles appear in soft paper on which we obtain a wild formation but do not appear on this same softer furnish on which we get a well closed formation. We therefore feel that these hard cockles in both the bonds and softer furnish papers are due to some unevenness in the paper itself, which causes the paper to shrink unevenly when it is dried in the loft.

"Upon request we will submit samples of the soft furnish marked No. 1, and samples of the 25 per cent soda and 75 per cent sulphite loft dried bonds No. 2, as we feel that the samples may enable the papermakers to get a better idea of our difficulty than if samples were not sent."

Send replies to Secretary TAPPI, 18 East 41st street, New York City.

United States Patents on Papermaking

Fourth Quarter, 1929

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography

The following patents may be obtained from the U. S. Patent Office, Washington, D. C., for ten cents each.

October 1, 1929.

1,729,628. Process of conditioning cellulosic material for preparation of cellulose derivatives and product of same. George A. Richter and Milton O. Schur and Royal H. Rasch, assignors to Brown Company, Berlin, N. H. Filed Oct. 9, 1926. 28 claims, (Cl. 260-146).

1,729,629. Raw material for cellulose derivatives and process of preparation. George A. Richter and Milton O. Schur, assignors to Brown Company, Berlin, N. H. Filed Aug. 5, 1927. 9 claims. (Cl. 92-9).

1,729,650. Process of waterproofing materials. Arthur S. O'Neil and Albert J. Hindrichs, assignors to Western Cartridge Company, East Alton, Ill. Filed Oct. 12, 1925. 2 claims. (Cl. 93-94).

1,729,992. Process of manufacturing paperboard. Levis Miller Booth, Plainfield, N. J. Filed Nov. 27, 1928. 4 claims. (Cl. 92-40).

1,730,009. Process of making paper and product thereof. Arthur L. Kennedy, assignor to Plastics, Inc. Filed Mar. 25, 1927. 24 claims. (Cl. 92-21).

1,730,082. Driving mechanism for paper making machines Bernard A. Malkin, Lachine, Quebec, Canada. Filed Oct. 27, 1928. 9 claims. (Cl. 34-38).

1,730,315. Bleached chemical wood pulp and process of making. Linn Bradley and Edward P. McKeefe, assignors to Bradley-McKeefe Corporation, New York, N. Y. Filed May 19, 1921. 17 claims. (Cl. 8-2).

October 8, 1929

1,730,338. Cyclic process of fiber liberation. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed May 19, 1928. 5 claims. (Cl. 92-11).

1,730,387. Process of refining pulp. Milton O. Schur, assignor to Brown Company, Berlin, N. H. Filed Aug. 5, 1927. 15 claims. (Cl. 92-9).

1,730,387. Processing of cellulose fiber. Milton O. Schur and Royal H. Rasch. assignors to Brown Company, Berlin, N. H. Filed Aug. 10, 1927. 14 claims. (Cl. 92-9).

1,730,450. Pulp-molding machine. Merle P. Chaplin, assignor to Fidelity Trust Company, Portland, Me. Filed Mar. 14, 1928. 15 claims. (Cl. 92-56).

1,730,543. Machine for making pasteboard boxes. John H. Storz, Philadelphia, Pa. Filed Nov. 27. 1928. 13 claims. (Cl. 83-36).

1,730,552. Paper-winding machine. Alonzo Aldrich. assignor to Beloit Iron Works, Beloit, Wis. Filed May 3, 1926. 15 claims. (Cl. 242-66).

1,750,849. Method and apparatus for making fibrous board. James J. Hinde, assignor to The Hinde Products Company, Chicago, Ill. Filed Oct. 31, 1927. 15 claims. (Cl. 92-43).

1,730,908. Fiber-stock-refining apparatus. John A. Wiener, Laurel, Miss. Filed Dec. 12, 1927. 3 claims. (Cl 92-27).

1,730,921. Wear distributor for suction-roll shells. Hiland R. Farnsworth, assignor to The Paper and Textile Machinery Company, Sandusky, Ohio. Filed Aug. 11, 1928. 9 claims. (Cl. 92-53).

1,731.112. Production of cellulose from highly-lignified plants. Roland Runkel, assignor to Verein für Chemische Industrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed May 11, 1927. 5 claims. (Cl. 92-9).

1,731,116. Plaster board and method of making same. Clarence W. Utzman. assignor to United States Gypsum Company. Filed June 14, 1921. 8 claims. (Cl. 154-2).

1,731,193. Apparatus for straining pulp. Lemuel B. Decker, Kenogami, Quebec. Canada. Filed Dec. 27, 1927. 5 claims. (Cl. 92-42).

October 15, 1929

1,731,245. Treatment of vegetable fibrous material and resulting product. George Heberlein, assignor to Heberlein Patent Corporation, New York, N. Y. Filed Jan. 28, 1928. 5 claims. (Cl 8-20).

1,731,354. Process of carbonizing the organic constituents of cellulose sulphite lye. Carl Gustav Schwalbe, Eberswald, Germany. Filed Apr. 4, 1927. 2 claims. (Cl. 252-7).

1.731,433. Non-delinquescent product from sulphite waste liquor. Paul Onnertz and Hans Weche and Karn Broudersen, assignor to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Nov. 12, 1926. 2 claims. (Cl. 252-7).

1,731,506. Heating apparatus for paper-mill surge tanks. Edgar Simez, Potsdam, N. Y. Filed Apr. 23, 1928. 2 claims. (Cl. 219-38).

1,731,527. Envelope. Albert W. Engel, Chicago, Ill. Filed Aug. 10, 1925. 2 claims. (Cl. 229-72).

1,731,603. Drying apparatus. Otto Richard Wolf, assignor to The Tribune Company, Chicago, Ill. Filed June 7, 1926. 12 claims. (Cl. 34-26).

1,731,679. Softening paper. Kurt H. Meyer, Johannes Muller and Ulrich Hoffmann, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Jan. 7, 1928. 2 claims. (Cl. 91-68). Paper contains sorbitol.

1,731,754. Artificial leather sheeting and method of making the same. Thomas G. Richards, assignor to Dispersions Process, Inc., Dover, Del. Filed May 11, 1928. 3 claims. (Cl. 92-41).

1,731,876. Paper drier. Stephen B. Stafford and John Warren Vedder, assignors to Rice, Barton and Fales, Incorporated, Worcester, Mass. Filed July 23, 1928. 3 claims. (Cl. 34-48).

1,731,877. Folding box. Arnold J. Tanner, North Haven, Conn. Filed Nov. 14, 1927. 1 claim. (Cl. 206-44).

1,731,967. Paper-excelsior machine. Louie J. Antonsen, Seattle, Wash. Filed Aug. 30, 1926. 7 claims. Issued Oct. 15, 1929.

1,731,969. Process of waterproofing paper and the like. Abelardo F. Campa, New York, N. Y. Filed Apr. 16, 1926. 6 claims. (Cl. 91-68).

1,732,114. Indicating device for beaters. George Stanford Witham, Jr., Hudson Falls, N. Y. Filed Apr. 8, 1927. 10 claims. (Cl. 92-24).

1,732,176. Process and apparatus for making paper. Melvin R. Ware, Baltimore, Md. Filed July 7, 1927. 11 claims. (Cl. 92-43).

October 22, 1929

1,732,511. Bleaching fiber pulp. Horatio A. Helder, assignor to The Champion Fibre Company, Canton, Ohio. Filed June 15, 1928. 4 claims. (Cl. 8-2).

1,732,540. Method of making fast-colored crepe paper and resulting product. Galen H. Sayler, assignor to Dennison Manufacturing Company, Framingham, Mass. Filed Oct. 2, 1926. 19 claims. (Cl. 92-69).

1,732,781. Apparatus for making tubular articles. John B. Tiffany, assignors to The Goodyear Tire and Rubber Company, Akron, Ohio. Filed June 29, 1927. 2 claims. Cl. 154-5).

1,732,833. Paper-feeding means for paper making machines. Russel Carpenter, Three Rivers, Quebec, Canada. Filed Mar. 3, 1928. 6 claims. (Cl. 34-48).

1,732,925. Suction box for paper-making machines. George S. Carroll, Willimansett, Mass. Filed Aug. 22, 1928. 2 claims. (Cl. 92-51).

1,733,070. Operation for paper mills. Donald K. Pattillo and James H. MacMahon, assignors to The Mathieson Alakli Works, Inc., New York, N. Y. Filed Dec. 23, 1927. 10 claims. (Cl. 92-20). Stock sterilized with chlorine before forming into pulp.

1,733,071. Manufacture of paper. Donald K. Pattillo and James H. MacMahon, assignors to The Mathieson Alkali Works, Inc., New York, N. Y. Filed Jan. 12, 1928. 10 claims. (Cl. 92-20). Slime removal by chlorine.

October 29, 1929

1,733,177. Liquid coating composition. Watson H. Woodford, assignor to Remington Arms Company, Inc., Filed Sept. 10, 1927. 10 claims. Issued Oct. 29, 1929. (Cl. 91-68). Paraffined paper tubes for shot shells with varnish coating.

1,733,255. Paper-box-making machine. Robert P. Frye, Marlboro, Mass. Filed Apr. 11, 1927. 10 claims. (Cl. 93-51).

1,733,393. Removal of caustic soda soluble substances from cellulose-containing materials. Harry P. Bassett, Cynthiana, Ky. Filed Dec. 22, 1925. 5 claims. (Cl. 260-10).

1,733,438. Stencil. Ludwig W. Wagner, assignor to A. B. Dick Company, Chicago, Ill. Filed May 21, 1928. 2 claims. (Cl. 41-3.5).

1,733,493. Bituminous emulsion. Lester Kirschbraun, Chicago, Ill. Filed May 7, 1924. 2 claims. (Cl. 134-1).

1,733,494. Process of making bituminous emulsion. Lester Kirschbraun, Chicago, Ill. 9 claims. Filed May 25, 1925. (Cl. 134-1).

1,733,495. Production of dispersions. Lester Kirschbraun, Leonia, N. J. Filed Mar. 25, 1927. 12 claims. (Cl. 134-1).

1,733,496. Production of aqueous dispersions. Lester Kirschbraun, Leonia, N. J. Filed July 30, 1927. 7 claims. (Cl. 134-1).

1,733,497. Aqueous dispersions and process of making same. Lester Kirschbraun, Leonia, N. J. Filed Aug. 8, 1927. 12 claims. (Cl. 134-1).

1,733,498. Aqueous dispersions and process of making same. Lester Kirschbraun, Leonia, N. J. Filed Jan. 2, 1928. 16 claims. Issued Oct. 29, 1929. (Cl. 134-1).

1,733,524. Coating paper. Donald B. Bradner, assignor to Champion Coated Paper Company, Hamilton, Ohio. Filed Nov. 8, 1926. 7 claims. (Cl. 91-68).

1,733,741. Method of and machine for making plaster board. William E. Lovett, assignor to United States Gypsum Company, Chicago, Ill. Filed Aug. 3, 1927. 10 claims. (Cl. 83-73).

1,733,921. Apparatus for forming a deckel edge upon paper sheets, cards or the like. Henry C. Thomas, Toronto, Ontario, Canada. Filed Nov. 7, 1928. 11 claims. (Cl. 92-68).

November 5, 1929

1,734,103. Coating machine. Frank H. Woolf, assignor to Savage Bros. Co., Chicago, Ill. Filed May 21, 1924. 2 claims. (Cl. 91-3).

1,734,297. Apparatus for surfacing paper. Joseph Moses Ward Kitchen, East Orange, N. J. Filed June 30, 1924. 13 claims. (Cl. 92-68).

1,734,632. Method and apparatus for bleaching pulp. Albert D. Merrill, assignor to The International Bleaching Corporation. Filed Aug. 11, 1925. 21 claims. (Cl. 8-2).

1,734,879. Paper-making machine. Robert E. Read, assignor to International Paper Company. Filed Aug. 17, 1927. 19 claims. (Cl. 92-49). Transfer of paper web to drier.

1,734,929. Paper-making machine. John Warren Vedder, Worcester, Mass. Filed June 28, 1926. 36 claims. (Cl. 92-45). Deckle straps.

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1,734,991. Recovery of sulphur from roaster gases. Raymond F. Bacon, Bronxville, N. Y. Filed May 6, 1927. 8 claims. (Cl. 23-226).

1,735,013. Process of pulping raw cellulosic material. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed June 1, 1928. 5 claims. (Cl. 92-7).

1,735,014. Process for the production of sulphite pulp. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed July 20, 1928. 13 claims. (Cl. 92-11).

1,735,015. Method of and apparatus for the production of cellulose pulp. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Aug. 23, 1928. 6 claims. (Cl. 92-7).

1,735,030. Method of making waterproof paper board. Edmund Bache, assignor to Waldorf Paper Products Company, St. Paul, Minn. Filed Nov. 8, 1926. 6 claims. (Cl. 92-41).

1,735,426. Production of fiber articles. Meyrl M. Frost, Capac, Mich. Filed Aug. 20, 1927. Renewed May 1, 1929. 3 claims. (Cl. 92-21).

1,735,427. Production of fiber articles. Meyrl M. Frost, Capac, Mich. Filed Aug. 20, 1927. 3 claims. (Cl. 92-21).

1,735,428. Production of fiber articles. Meryl M. Frost, Capac, Mich. Filed Aug. 20, 1927. Renewed May 1, 1929. 3 claims. (Cl. 92-21).

1,735,429. Production of fiber articles. Meryl M. Frost, Capac, Mich. Filed Aug. 20, 1927. Renewed May 1, 1929. 3 claims. (Cl. 92-21).

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1,735,877. Manufacture of wall board. Caleb Payne, assignor to Gypsum Engineering and Manufacturing Co., Chicago, Ill. Filed May 10, 1926. 10 claims. (Cl. 154-2).

1,736,080. Process for opening up materials containing cellulose. Heinrich Heimann and Hermann Seefried and Alfons Bayerl, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed July 7, 1927. 4 claims. (Cl. 92-9).

1,736,460. Paper-making machine. George H. Harvey, assignor to The Black-Clawson Company, Hamilton, Ohio. Filed Aug. 9, 1926. 14 claims. (Cl. 92-49).

1,736,407. Envelope machine. Harold S. Labombarde, Nashua, N. H. Filed Nov. 3, 1927. 15 claims. (Cl. 93-62).

1,736,570. Paper-making machine. John D. Beatty, Los Angeles, Calif. Filed Sept. 5, 1928. 4 claims. (Cl. 92-43).

1,736,622. Wood-shredding machine. Oliver Bennett Randall, Wheeler, Oregon. Filed Oct. 18, 1928. 10 claims. (Cl. 92-20).

1,736,633. Means for impregnating felt or other fabrics. Karl Henry Schutte, Jersey City, N. J. Filed Jan. 27, 1927. 4 claims. (Cl. 91-18).

1,736,699. Method of forming vulcanized fiber tubes. Homer J. Davis, Wilmington, Del. Filed Dec. 31, 1927. 7 claims. (Cl. 18-55).

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1,736,802. Process of treating Talloel. Willi Schultze, Halle-on-the-Salle, Germany. Filed Sept. 30, 1927. 5 claims. (Cl. 87-4).

1,736,924. Bark-removing machine. Knut Robert Johan Lagus, Abo, Finland. Filed July 14, 1927. 4 claims. (Cl. 144-208).

1,737,015. Machine for drying coated webs. Charles J. Merrill, Portland, Me. Filed Apr. 30, 1928. 6 claims. (Cl. 34-48).

1,737,055. Moistureproof envelope or wrapper. Walter Everett Molins, Deptford, London, England. Filed Apr. 5, 1928. 3 claims. (Cl. 229-87).

1,737,187. Moistureproof material. William Hale Charch and Karl Edwin Prindle, assignors to du Pont Cellophane Company, Inc., New York, N. Y. Filed Jan. 3, 1927. 17 claims. (Cl. 91-68).

1,737,282. Fibrous material and method of making same. Howard F. Weiss, assignor to C. F. Burgess Laboratories, Inc., Madison, Wis. Filed Oct. 4, 1926. 56 claims. (Cl. 92-39).

1,737,283. Multiply paper machine. Howard F. Weiss, assignor to C. F. Burgess Laboratories, Inc., Madison. Wis. Filed Nov. 12, 1928. 26 claims. (Cl. 92-39).

1,737,284. Laminated pulp board and process of making the same. Ralph L. Loomis, assignor to C. F. Burgess Laboratories, Inc., Madison, Wis. Filed Aug. 5, 1926. 11 claims. (Cl. 92-39).

1,737,285. Laminated fibrous sheet. Max Kliefoth, assignor to C. F. Burgess Laboratories, Inc., Madison, Wis. Filed Oct. 25, 1928. 8 claims. (Cl. 92-39).

1,737,286. Tapered-fibrous sheet. Max Kliefoth, assignor to C. F. Burgess Laboratories, Inc., Madison, Wis. Filed Oct. 26, 1928. 29 claims. (Cl. 92-39).

1,737,296. Apparatus for screening paper stock. Andrew J. Brookover, Dowingtown, Pa. Filed Oct. 3, 1928. 3 claims. (Cl. 92-32).

1,737,330. Production of paper. Donald K. Pattillo and James H. MacMahon, assignors to The Mathieson Alkali Works, Inc., New York, N. Y. Filed Dec. 23, 1927. 9 claims. (Cl. 92-21). Slime removal by chlorine.

1,737,413. Wall board. Einar Erola, Salem, Mass. Filed Mar. 10, 1927. 3 claims. (Cl. 754-45.9).

1,737,542. Process of making wood pulp. William Brydges and Spottswood C. Foster, assignors to Bedford Pulp and Paper Company, Inc., Big Island, Va. Filed Jan. 18, 1919. 5 claims. (Cl. 92-6). Preliminary alkaline treatment, followed by grinding.

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1,737,551. Burr for dressing pulp grindstones. Frank W. Aikin, Watertown, N. Y. Filed Oct. 22, 1925. 2 claims. (Cl. 125-37).

1,737,590. Chemical pulping process. Bjarne Johnsen, assignors to Hammermill Paper Company, Erie, Pa. Filed Feb. 16, 1927. 7 claims. (Cl. 92-9).

1,737,699. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 6 claims. (Cl. 92-37).

1,737,700. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 3 claims. (Cl. 92-37).

1,737,701. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 7 claims. (Cl. 92-37)

1,737,702. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 7 claims. (Cl. 92-37).

1,737,703. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 4 claims. (Cl. 92-37).

1,737,704. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 4 claims. (Cl. 92-37).

1,737,705. Agitator. Joseph E. Bond, Appleton, Wis. Filed Mar. 5, 1928. 3 claims. (Cl. 92-37).

1,737,760. Reduction of the swelling capacity of hydrated cellulose and the resulting product. Claus Heuck and Paul Esselmann, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Dec. 20, 1928. 10 claims. (Cl. 8-20).

1,737,781. Paper-making machine. Melvin R. Ware, Westminster, Md. Filed Sept. 5, 1928. 3 claims. (Cl. 92-44).

1,737,926. System for drying paper and textiles and the like. Thomas H. Ireland, Rockville Center, N. Y. Filed Mar. 1, 1926. 19 claims. (Cl. 34-48).

1,738,035. Mandrel for use in machines for making artificial straws and other tubes. Carl Casey, assignor to Stone Straw Corporation, Washington, D. C. Filed Feb. 18, 1929. 8 claims. (Cl. 93-80).

1,738,353. Slitting machine. James A. Cameron, and Robert McC. Johnstone, assignors to Cameron Machine Company, Brooklyn, N. Y. Filed Dec. 3, 1923. 8 claims. (Cl. 164-65).

1,738,354. Web cutting and feeding mechanism. William H. Cannard, Green Bay, Wis. Filed Mar. 31, 1926. 17 claims. (Cl. 164-68).

1,738,357. Cylinder mold. Alvan S. Clark, Holyoke, Mass. Filed Dec. 8, 1928. 3 claims. (Cl. 92-42).

1,738,509. Waterproof sheet and process of making same. Lester Kirschbraun, Leonia, N. J. Filed July 19, 1928. 24 claims. (Cl. 92-21).

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1,738,520. Paper drying machine. Warren E. Beadle, Port Arthur, Ontario, Canada. Filed Apr. 11, 1928. 2 claims. (Cl. 34-48).

1,738,543. Process for removing odors from gases and air. John T. Travers, assignor to The Travers-Lewis Process Corporation, Columbus, Ohio. Filed May 18, 1928. 4 claims. (Cl. 23-4).

1,738,591. Process for the continuous manufacture of floor covering. Augustus Lannoye, Genval, Belgium. Filed Jan. 28, 1928. 2 claims. (Cl. 92-40).

1,738,628. Waterproofing. Stanley L. Willis and Watson H. Woodford, assignors to Remington Arms Company, Inc., Bridgeport, Conn. Filed May 12, 1925. 11 claims. (Cl. 91-70). Waterproofing composition for paper cartridge shell bodies.

1,738,794. Method and apparatus for saturating fibrous articles. Howard Parker, assignor to Brown Company, Berlin, N. H. Filed Mar. 6, 1925. 17 claims. (Cl. 91-70).

1,738,798. Printing ink composition and process of making same. George A. Richter and Everett W. Lovering, assignors to Brown Company, Berlin, N. H. Filed Aug. 30, 1927. 13 claims. (Cl. 134-36). Contains waste sulphite liquor.

1,738,832. Plaster board construction. Otho V. Kean, Providence, R. I. Filed July 26, 1927. 9 claims. (Cl. 72-124).

1,738,976. Process for fireproofing cellulose. Feirnando Somoza Vivas, assignor to International Fireproof Products Corporation, New York, N. Y. Filed Mar. 11, 1927. 3 claims. (Cl. 91-68).

1,739,038. Paper making method and machine. William H. Millspaugh, assignor to The Paper and Textile Machinery Company, Sandusky, Ohio. Filed Jan. 3, 1923. 47 claims. (Cl. 92-43).

1,739,300. Card deckling machine. William H. Gibson, assignor to Gibson Art Company, Cincinnati, Ohio. Filed Nov. 19, 1928. 18 claims. (Cl. 92-68).

1,739,381. Method of preparing paper rolls for the web change. Henry A. Wise Wood, assignor to Wood Newspaper Machinery Corporation, New York, N. Y. Filed Aug. 27, 1927. 7 claims. (Cl. 154-42).

1,739,394. Cutter for paper-bag tubes. Louis H. Hartman, assignor to St. Regis Paper Company, New York, N. Y. Filed July 14, 1927. 16 claims. (Cl. 93-8).

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1,739,491. New process for utilizing stem fibers. Carlos Ernesto Bahre, Buenos Aires, Argentina. Filed Dec. 9, 1927. 5 claims. (Cl. 92-10).

1,739,564. Barking drum. Peder Pederson Westbrye, Peterborough, Ontario, Canada. Filed Feb. 11, 1928. 6 claims. (Cl. 144-208).

1,739,572. Method of and apparatus for finishing glassine paper. Paul W. Bidwell, assignor to B. F. Perkins and Son, Inc., Holyoke, Mass. Filed Sept. 19, 1927. 1 claim. (Cl. 92-71).

1,739,580. Paper product. Carleton Ellis, assignor to Ellis-Foster Company, Montclair, N. J. Filed June 18, 1928. 21 claims. (Cl. 92-21). Paper carrying oxidized wax.

1,739,581. Container and hood cap therefor. Carleton Ellis, assignor to Ellis-Foster Company, Montclair, N. J. Filed May 3, 1926. (Cl. 215-38). Paper hood cap for bottles.

1,739,582. Water-resistant paper-disk stopper for milk bottles and the like. Carleton Ellis, assignor to Ellis-Foster Company, Montclair, N. J. Filed May 7, 1926. 15 claims. (Cl. 215-51).

1,739,597. Indurated porous object and process for making same. John J. Kessler, St. Louis, Mo. Filed Sept. 24, 1928. 8 claims. (Cl. 91-70).

1,739,645. Preservation of fibers for pulp making purposes. Treadway B. Munroe and Elbert C. Lathrop, Chicago, Ill. Filed June 8, 1927. 19 claims. (Cl. 92-5).

1,739,683. Treatment of fibrous vegetable materials. Owen David Lucas, assignor to Vickers Limited, Westminster, England. Filed Dec. 11, 1928. 2 claims. (Cl. 92-9).

1,739,766. Method of making compressed dehydrated cellulose sheets. Albert W. Morris, assignor to George E. Coblens, New York, N. Y. Filed May 11, 1927. 5 claims. (Cl. 92-54).

1,740,132. Method of making straw paper. Edward B. Weston and William G. Clark, assignors to The Weston Paper and Manufacturing Company, Dayton, Ohio. Filed Feb. 15, 1929. 10 claims. (Cl. 92-3).

1,740,280. Distended fibrous material and process of producing the same. Frank L. Bryant, assignor to Sidney L. Schwarz, Chicago, Ill. Filed Dec. 19, 1928. 20 claims. (Cl. 92-21).

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1,740,644. Rag-disintegrating machine. Eugene C. Brooks, Springfield, Vt. Filed Nov. 22, 1926. 5 claims. (Cl. 19-83).

1,741,029. Stencil sheet and backing. William H. Kurth, assignor to The Heyer Duplicating Co., Inc., Chicago, Ill. Filed Aug. 29, 1927. 1 claim. (Cl. 41-3.5).

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1,741,266. Moisture indicator and control. George S. Witham, Jr., Hudson Falls, N. Y. Filed Apr. 30, 1926. 2 claims. (Cl. 73-24).

1,741,347. Stock-controlling means for paper-making machines. John Robert Spoor, Kalamazoo, Mich. Filed Nov. 28, 1928. 2 claims. (Cl. 92-46).

1,741,382. Crating apparatus. John Stogdell Stokes, assignor to Stokes and Smith Company, Philadelphia, Pa. Filed Jan. 28, 1925. 27 claims. (Cl. 91-50).

1,741,403. Roofing strip. Maurice L. Caton, assignor to The Barrett Company, New York, N. Y. Filed Aug. 28, 1924. 1 claim. (Cl. 108-8).

1,741,456. Envelope. Stanislaw Flis and Mateusz Kasprzak, Gowanda, N. Y. Filed Mar. 12, 1928. 1 claim. (Cl. 229-82).

1,741,490. Paper container. Edward C. Angell, New York, N. Y. Filed Nov. 2, 1927. 3 claims. (Cl. 229-48).

1,741,496. Process for stripping rags with sulphur dioxide. Frederick W. Binns, assignor to Virginia Smelting Company, Portland, Me. Filed Aug. 6, 1927. 9 claims. (Cl. 8-2).

1,741,520. Roll cutting and winding machine. Emil Jagenberg, Dusseldorf, Germany. Filed Aug. 30, 1926. 13 claims. (Cl. 164-65).

1,741,540. Process for the production of high-alpha cellulose fiber for the manufacture of cellulose derivatives. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Dec. 16, 1925. 3 claims. (Cl. 92-13).

1,741,556. Oil and grease proof liner paper or board and process of making same. Albert L. Clapp, Danvers, Mass. Filed July 16, 1926. 10 claims. (Cl. 154-2).

1,741,884. Machine for the mechanical production of paper cups pressed in folds. Emil Schmidt, Leipzig, Germany. Filed Feb. 2, 1928. 5 claims. (Cl. 93-60).

1,741,974. Suction-roll shell drilling. Harry C. Burden, assignor to The Paper and Textile Machinery Company, Sandusky, Ohio. Filed Nov. 23, 1928. 10 claims. (Cl. 92-53).

1,742,174. Paper-bag machine. Alfred C. Coty and Thomas Earl Coty, Carthage, N. Y. Filed June 23, 1924. 13 claims. (Cl. 93-15).

Report of the Paper Board Committee*

By C. C. Heritage, Chairman[1]

A brief report was made at the Richmond meeting of the Technical Association and published, of the organization of the Paper Board Committee into three subcommittees, in accordance with a thorough discussion of the matter at the annual meeting a year ago. This subcommittee organization is a functional one dealing with the three major fields of work. Subcommittee No. 1 covers the field of *Paper Board quality and converted products* and has been lead by Mr. E. F. Whittington of The Sutherland Paper Company. Subcommittee No. 2 covers the field of the *cylinder machine* itself and has been lead by Mr. George R. Wyman of Bird and Son. Subcommittee No. 3 covers the field of *raw materials and stuff* and has been lead by Mr. Arthur R. Harvey of the Gardner and Harvey Company.

Each of the subcommittees has a membership of eight paper board men whose interests lie especially in the particular subcommittee of which each is a member. The first half of the current year was taken up entirely with organization work so that by the time of the fall meeting it was possible to hold a committee meeting and decide upon specific problems to be studied.

Use Requirements of Paper Board

The activities of subcommittee No. 1 are along the lines of classifying paper board according to use, studying methods of test for properties considered to be the most important, and securing information on the processes by means of which paper board is manufactured into articles for consumption and information on how these articles stand up in use. Although this subcommittee's work is just getting under way three papers have been secured for presentation at this annual meeting as follows:

Mr. Plaskett of the Forest Products Laboratory staff discusses "Types of Failures in Shipping Containers and Causes for Each" The Forest Products Laboratory at Madison, Wisconsin has been engaged in the study of the testing and serviceablity of fiber containers for a number of years and recently has undertaken surveys of transportation hazards to determine how to effect the greatest economy in transporting merchandise in fiber containers either through eliminating the hazards or through designing the containers to withstand the hazards. The primary objective in this work thus far is to develop a procedure for making surveys that will insure uniform and accurate results and be suitable for the railroads, box manufacturers and shippers to follow in studying the serviceability of this particular product. Mr. Plaskett's paper is intended primarily to acquaint the paper board men with the procedure being developed and its possibilities.

Mr. Rammer of Fiber Board Products, Inc. discusses "Some Problems in Converting Board to Cartons." Mr. Rammer is a member of the subcommittee and has a great deal of experience in the field of converting paper board to cartons.

It will be noted that one of these papers deals with the serviceability of the consumed product, another with the conversion variables, and a third with properties required in a board for a particular use.

Machine Variables

The activities of subcommittee No. 2 are in connection with the effects of some of the variables of the wet end of the cylinder machine on water removal. Mr. Wyman and his associates have been studying these matters for a considerable time and it is fortunate that they are able to present so soon after organization of the committee a paper entitled "Studies of Water Removal at the Wet End of the Cylinder Machine." These studies have involved thus far primarily a water balance on the wet end to determine actual operating conditions as regards water removal. The effects of vat design, cylinder clothing, and temperature are under study and Mr. Wyman plans to extend the work to include the other variables of the wet end. The real problem is how to get the greatest water removal after the stock is in the vat. There are a great many places where water can be mechanically removed from the stock at the wet end and to get the highest efficiency on the machine the sheet should be entered on to the first drier with the least possible amount of water. It is much cheaper to remove the water from the sheet mechanically than it is to evaporate it on the driers.

Stuff Preparation

The activities of subcommittee No. 3 are along two major lines. (1) Studies of jordan and beater performance in hydrating paper stock and (2) evaluation. The jordan studies have not yet progressed to the point where the findings are complete enough for presentation to the Technical Association but a paper on this subject will probably be ready for the fall meeting. In regard to the beater studies however Mr. Harvey is presenting a paper entitled "Experiments in Laboratory Beating."

Developments in Paper Board Manufacture

This report is concluded by mentioning briefly certain developments of interest technically which concern the manufacture of paper board. The production of chestnut corrugating board has been increased by the construction of new mills in Virginia, North Carolina and Tennessee. The production of kraft Liner has been increased particularly by ney mills in the Pacific Northwest. One mill is producing Test Liner from semi-sulphite pulp made from mill waste.

Improved Stuff Preparation

The board mills are giving considerable attention to improved stuff preparation both by means of so called high speed beaters and by jordans designed to hydrate the stock rather than to cut it which has previously been the practise. Improvements are constantly being made in the mechanical design of the cylinder machine such as anti-friction bearings, spiral bevel gear drives, predrying units, vertically arranged driers, sectional drives and individual drives for the cylinder molds. The urge is for increased production and consequently machines are being installed of greater width, larger cylinder mold diameter and greater lineal speed. This trend involves change in felt design, heavier presses, more presses, more perfectly balanced rolls and more driers.

The literature of the past year has included an official TAPPI method for the evaluation of unimpregnated roofing felt, study of fiber wall boards for developing specifications and a method for measuring the strength and stiffness of paper board by a static bending test.

Concurrent with the speeding up of paper board manufacture, improvements have been made in printing presses, gluing machines and corrugating machines to increase production and decrease unit cost. The use of cartons is continually expanding to replace containers made of other material, bread is now being sliced before wrapping necessitating the use of a tray and candy vending machines have necessitated another new use for a carton.

The Most Disappointing Feature

The most disappointing feature from a technical standpoint is perhaps that the quality of paper board in general has not only not improved but has in all probability gone backward. The constant demand of the buyer for lower prices has forced some mills to manufacture a line of second grade board to meet this demand. It would appear that the buyers must be educated to the merits of quality products in the paper board field.

* To be presented at the annual meeting of TAPPI, Pennsylvania Hotel, New York, N. Y., Feb. 19, 1930.

[1] Oxford Paper Co., Rumford, Maine.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Machinery

Rosser, C. E. Clowes. U. S. pat. 1663,794, Mar. 27, 1928. The log is supported across a slowly traveling endless belt, but is held in position under the scraping elements by means of a suitable stop or rest, so that the travel of the belt causes the log to rotate. Removal of the bark is effeced by means of a series of scrapers or knives connected by means of a series of links which form a endless traveling chain, the scrapers being held against the log by means of a fixed rail. The scrapers are designed and mounted to be adjustable, so that the angle of contact may be changed to suit different species and conditions of wood, and so that the scrapers may accommodate themselves to irregularities in the surface of the logs. A stop is provided to take up the end thrust of the logs due to the action of the scrapers.—A. P.-C.

Barking Drum. B. Branch. U. S. pat. 1,672,300, June 5, 1928. The drum is carried on rings provided with inwardly directed lugs. The rings are connected by means of longitudinal channel bars which are mounted between adjacent lugs on the rings. The flanges of the channel bars are directed outwardly, and a rivet or bolt is passed through each lug of the flanges of adjacent bars in contact therewith. This construction overcomes the disadvantage to the usual construction of barking drums, wherein the heads of the rivets or bolts holding the bars to the rings are located inside the drum.—A. P.-C.

Apparatus for Barking Slabs. F. E. Hummel. U. S. pat. 1,670,723, May 22, 1928. The slabs are fed through the apparatus by means of positively driven upper and lower feed rolls. The lower rolls are journalled in fixed bearing, while the upper ones are journalled so as to accomodate themselves automatically to variations in the thickness of the slabs. The barking members consist of a number of heavy metal balls fastened by means of chains to one or more series of rotating disks, so that when the slab is fed through the apparatus the balls are successively brought into contact with the slab with considerable force, pounding the bark and loosening it sufficiently so that it may drop off. If desired, only one set of ball-carrying disks may be provided; or, when two sets are used, the balls may be dispensed with on the second set, the action of the chains being sufficient to finish the removal of the bark. A. P.-C.

Dryer for Wood Waste or Chips. O. Nordstrom. U. S. pat. 1,669,012, May 8, 1928. This patent covers a feature of the Norstrom drying tower for recirculating a portion of the gas which has already served to dry the chips of wood waste. It consists of an annular artition, baffle, or shelf, which is inserted between the outer perforated wall and the surrounding brick wall, at about the middle of the height of the tower. It extends in a substantially horizontal direction and is arranged so that its outer circumference lies within the opening of the conduit through which part of the gas it taken from the tower for circulation. It operates to direct the gases which pass through that portion of the material which is below the partition into the recirculating conduit. As this material is already dried to a considerable extent when it nears the lower portion of the tower, the drying possibilities of the lower strata of gas are not fully utilized; and by recirculating this portion (instead of merely taking a certain portion of the total gases passing out of the tower) greater drying efficiency is attained. The recirculating conduit is provided with a damper operated by a servo motor, controlled thermostatically so that the amount of gas recirculated is automatically adjusted according to the temperature in the tower. When the damper is completely closed the gas below the annular partition escapes around the latter to the stack; when the damper is wide open part of the gas passing through the tower above the annular partition is drawn into recirculating duct. The annular partition may be either permanently attached to the outer perforated wall of the tower, or mounted in such a manner that its height may be adjusted as required—A. P.-C.

Conical Chip Distributor for Digesters. E. Castren and E. Oksa. U. S. pat. 1,675,211, June 26, 1928. A cone is suspended in the charging hole of the digester and in the path of the charge, and steam under pressure is discharged under the cone to more evenly distribute the chips inside the digester.—A. P.-C.

Method and Apparatus for Charging Pulp Digesters. P. A Fresk. U. S. pat. 1,676,691, July 10, 1928. A removable cylindrical casing is inserted between the charging hole of the digester and the hopper of the chip bin. The casing is provided with an inlet and an outlet for the air, both of which are connected with a suitable fan device by means of a closed conduit. The inlet communicates with an ejecting device consisting of a tube made of sheet metal, fabric, leather, etc. constructed so that it may be telescoped so as to lower it a suitable distance down into the body of the digester and raise it gradually as the level of the chips rises in the digester. The chips are thoroughly packed by the strong air current; and as the latter rises around the tube and is drawn back into the fan, it does not interfere with the downward-flowing chips.—A. P.-C.

Process and Apparatus for Treating Fibrous Materials for Pulping Purposes. T. L. Dunbar assignor to Chemipulp Process, Inc. U. S. pat. 1,669,234, May 8, 1928. The invention consists essentially of the combination of a digester, equalizing tank and acid accumulator, and may be used either in the sulphite, sulphate or soda process. In the sulphite process after the digester has been filled and steam turned on, the liquor is circulated through an equalizing tank placed above the digester and back into the bottom of the digester. When the increase in volume of the liquor due to condensation of the cooking steam is such as to nearly fill the equalizing tank, any excess is automatically sent to the acid accumulator through an automatic Semco trap. The gas relieved from the top of the digester is mixed with the circulated liquor so as to keep up the strength of the acid in the digester and allow of the use of a weaker cooking liquor. Provision is also made for circulating the liquor directly from the accumulator which is showered over the uncovered chips and at the same time liquor is drawn from the digester back into the accumulator in excess of that which is pumped into the digester, thus allowing the latter to be practically drained free of liquor at the end of the cook. At this stage weak liquor is pumped into the the top of the digester, thus giving the first washing in the digester instead of in the diffusers or blow tanks, as heretofore, and rebuilding the pressure in order to obtain enough pressure to blow out the contents of the digester. The liquor which has drawn back into the accumulator is ready for reuse or for recovery.—A. P.-C.

Soda or Sulphate Pulp Digester. A. W. Waern. U. S. pat. 1,658,216, Feb. 7, 1928. The invention consists essentially of a pulp digester having a sloping bottom end provided with a cent-

rally disposed charge outlet and a casing secured to the bottom of the digester around the discharge opening. The casing is preferably substantially cylindrical and a substantially cylindrical screen is mounted therein. The circulating liquor is withdrawn from the casing and is pumped back into the top of the digester. A bottom plate is secured to the lower end of the casing and is dished or downwardly inclined, and has a discharge opening through which the digested pulp is discharged during the blow. When the digester has a square bottom, a sloping beam is inserted, the space between the sloping and the square bottom being filled with concrete. A. P.-C.

Centrifugal Pulp Screen. G. F. Shevlin assignor to G. Shevlin & Son. U. S. pat. 1,664,996, Apr. 3, 1928. This is an improvement on the centrifugal pulp screen stock distributor described in U. S. pat. 1,436,411, of Nov. 21 1922. The apparatus as shown in the latter patent includes a centrally disposed hub, a cylindrical member arranged concentrically with the hub and connected therewith by a series of spaced, preferably radially placed, blades which extend beyond the cylindrical member, together with a series of vanes, there being a vane associated with that portion of each blade which extends beyond the cylindrical member; and in the cylindrical member there are sets of ports or openings making passageways through the same adjacent the inner ends of the vanes, the latter extending from the top or upper end of the distributor to a point approximately midway thereof. As it has been found that with pulp of certain consistencies the stock, or a large portion of it, in passing through the apertures in the cylindrical member is projected directly against the screen without the intervention of the vanes, the present patent provides a number of deflector plates each associated with one of the vanes, so that as the stock passes through the port in the cylindrical member the deflector plate directs it positively to the corresponding vane. This obviates all possibility of any of the stock being projected directly from the port or aperture in the cylindrical member through which it passes to the screen, and it thus utilizes the vanes to their fullest capacity in imparting a swift motion to the stock as it is delivered against the screen. A. P.-C.

Rotary Screen. J. A. White assignor to the Moore & White Company. U. S. pat. 1,668,579, May 8, 1929. The screen is made preferably in the form of a polygon having a number of flat screen sections. Mounted on the sides of the vat are saddles for U-shaped rockers, spaced apart on each side of the vat. Secured to each pair of rockers is a perforated segmental plate extending between the side of the vat and the screen, and a short reciprocating motion is given to the plates and to the rockers so that the plates will cause the paper stock to be forced through the meshes of the screen into the interior of the cylinder when moving in one direction, and will tend to clear the meshes of the screen when moving in the opposite direction. A steam or water spray is provided inside the screening drum for the purpose of being an aid in cleansing the surface of the screen of adhering stock. —A. P.-C.

Vertical Pulp Screen or Knotter. I. L. Laird assignor to Bird Machine Company. U. S. pat. 1,675,612, July 3, 1928. A screen in the form of an inverted truncated cone is carried by a vertical rotating shaft. The stock is introduced through an inlet at the top which is concentric with the shaft, and falls into a stock distributing bowl which is rotated with the shaft. Centrifugal force throws the stock out over the edge of the distributing bowl against a guide which deflects it on to the screen. Two spray pipes are provided, inside the outside the screen respectively, and at diametrically opposite points, to wash down the coarse stock adhering to the inside of the screen and direct it into a tailing guide, which guides them into a tailings distributing bowl, from which they are discharged from the apparatus. —A. P.-C.

Miscellaneous

Prepared Roofing and Method of Making the Same. T. Robinson assignor to Lancaster Asphalt, Inc. U. S. pat. 1,676,351, July 10, 1928. The material comprises a core or base of a suitable plastic material, which is waterproof and becomes substantially rigid on setting, preferably a mixture of asphalt and asbestos sand. The core is wholly encased within a jacket, preferably consisting of a continuous helical wrapping of impregnated paper, the wrapping and such parts of the core as are exposed are coated with a waterproofing compound, and surfacing material applied to such portions as may be desirable. The mixture used to form the core is discharged in the form of a continuous tubular layer along the surface of a mandrel. While in this form it is wound helically with a strip of impregnated paper, after which it passes to the various shaping rolls and coating, surfacing and cutting apparatus. A.P.-C.

Paper Roll Wrapping Machine. G. Meyer-Jagenberg. U. S. pat. 1,663,554, Mar. 27, 1928. The entire combination of driving means, winding-off and gluing mechanism for the wrapping paper is disposed below the working table of the machine; and the rising of the rolls to be wrapped up into the working position is effected simultaneously with the letting down of the wrapped up rolls and by the utilization of the weight of the latter. A.P.-C.

Paper Corrugating and Crinkling. B. C. Stickney. U. S. pat. 1,661,393, Mar. 6, 1928. The invention relates to gathering a web of paper laterally by forming longitudinal corrugations therein, and also longitudinally by forming transverse crinkles in the corrugated web, and covers a method of construction of the longitudinal corrugating plate. A.P.-C.

Impermeable Abrasive Paper. C. A. Klein and R. S. Brown. Eng. pat. 619,748, Jan. 5, 1927. The base paper is passed through a bath of linseed oil heated to 100° C and containing a little paraffin or other waxy substance; the excess oil is removed by press rolls heated to at least 100°C; an adhesive coating is applied, consisting of a mixture of drying oil and natural or synthetic gum, also heated to at least 100°C. The abrasive is applied to the prepared base, which is then baked above 100° C a second coat of adhesive is applied and baked again. A. P.-C.

Protective Paper and Method of Making the Same. B. W. Smith assignor to the Todd Company Inc. U. S. pat. 1,675,769, July 3, 1928. Safety paper is made by marking with erasable ink and in superposed relation two or more patterns, one of which is formed by a multiplicity of closely arranged spots of area bounded by area portions of a different color, and combining in superposition with the other pattern or patterns to form an intricate resultant pattern composed of repeated figures. A. P.-C.

Paper Crinkling Machine. .W. A. Lorenz assignor to The Otaka Fabric Company. U. S. pat. 1,676,655, July 10, 1928. The paper crinkling doctor is supported for angular movement from one position to another, being adapted to crinkle the paper and strip it from the cylinder in one position and to strip the paper without crinkling it in the other position; and means are provided for moving the doctor periodically from one position to the other. A. P.-C.

Paper. A. L. Kennedy assignor to The Plastic, Inc., Can. pat. 280,789, June 5, 1928. To 454 g. of cotton rag fiber thoroughly pulped add 22 g. of kelp containing both algin and glucose reduced to aqueous solution by incorporation of 2 g. of caustic soda dissolved in 25 cc. of water. Mix to produce a homogeneous mass. Add 16. g. of zinc sulphate dissolved in 200 cc. of water to act as precipitant. Wash the mass until the wash water shows the presence of no sulphates. Paper made from this mass is flexible, with increased resistance of electricity, heat, cold, oils and moisture. A. P.-C.

SECTION OF THE
COST ASSOCIATION OF THE PAPER INDUSTRY
Affiliated with
THE AMERICAN PAPER AND PULP ASSOCIATION
Edited by Thos. J. Burke C.A. Sec.-Treas.

What Are We Working For?

By Thomas J. Burke, C. A.[1]

What are we working for? Speaking generally of corporations manufacturing pulp, paper and products and basing our reply on figures published by the U. S. Treasury Department, the answer is—"Very Little."

The following statement has been prepared from Statistics of Income for 1927, published in 1929. **The figures have been re-arranged to separate profits (and losses) from operations, from income from other sources.** Also percentages have been added using the Gross Sales figure as 100 per cent. The dollar figures have not been changed in any way and represent the actual facts as disclosed by the income tax returns. This should be emphasized because, except in one respect, the showing is a poor one and brings out very strongly the need for stronger sales policies, which will insist on a fair margin of profit on *all* pulp and paper products sold.

A Favorable Factor

The favorable factor referred to, has to do with the fact that, as compared with manufacturing corporations in other industries in 1927, a *larger percentage of corporations reporting in our industry made a profit than in any other industry.* In all 2083 corporations manufacturing pulp, paper and products reported as follows:—

		Per cent
Reporting net income	1,386	66.54
Reporting no net income	642	30.82
Total active corporations	2,028	97.36
Inactive—Reporting no income data	55	2.64
	2,083	100.00

That is to say, 66.54 per cent of all corporations reported a net income of some kind while 30.28 per cent reported losses and the balance (2.64 per cent) were not carrying on business. If only the 2028 active corporations are considered and this figure is taken as 100 per cent, the percentages would be:—

		Per cent
Reporting net income	1,386	68.34
Reporting no net income	642	31.66
	2,028	100.00

For practical purposes, we might say 2 out of 3 corporations made money in 1927 and this is a better showing than that made by any other group listed under "manufacturing" in the industrial groups—Here they are:—

	Per cent Corporations Reporting	
	With net income	No net income
Food products, beverages and tobacco	59.47	36.27
Textile and textile products	59.49	38.57
Leather and leather products	60.06	35.47
Rubber and retailed products	51.15	43.36
Lumber and wood products	53.45	42.90
Paper, pulp and products	66.54	30.82
Printing and publishing	63.06	33.98
Chemicals and allied substances	54.78	40.00
Stone, clay and glass products	55.25	40.07
Metal and metal products	56.00	40.37
All other manufacturing industries	50.68	42.15
	57.40	38.75

[1] Sec.-Treas., Cost Association of the Paper Industry.

At least, we were on the top of that heap and our good friends the printers and publishers were a good second.

The next item of interest is, that in 1927 we paid $16,063,362 Federal Income taxes which is 1.42 per cent of the total tax paid by corporations in that year. 1386 corporations paid this tax, an average of about $11,600 each.

CORPORATIONS MANUFACTURING PULP, PAPER AND PRODUCTS. ANALYSIS OF INCOME STATEMENTS FOR 1927

	Corporations Reporting Net Income		Corporations Reporting No Net Income	
	Amount	Per cent	Amount	Per cent
Gross sales	$1,341,846,975	100.00	$254,435,084	100.00
Cost of goods sold	979,709,542	73.01	213,540,945	83.93
Gross profits from sales	$362,137,433	26.99	$40,894,139	16.07
Miscellaneous deductions	204,304,504	15.22	41,937,328	16.48
Depreciation	46,773,496	3.48	9,887,653	3.89
Interest paid	19,620,577	1.49	9,929,179	3.90
Federal income tax	16,063,362	1.19	.....	....
Other taxes	14,893,593	1.11	3,354,665	1.32
Bad debts	3,231,385	.24	1,025,927	.40
Depletion	1,338,272	.09	154,822	.06
Total	306,225,189	22.82	66,289,574	26.05
Net profits from sales	55,912,244	4.17	.....	.....
Net losses from sales	.....	....	25,395,435	9.98
Other profits from operations	5,707,343	.42	1,154,722	.45
Total profits from operations	61,619,587	4.59	.....	....
Total losses from operations	.....	....	24,240,713	9.53
Miscellaneous receipts	39,272,854	2.93	3,274,243	1.29
Interest received	7,032,008	.52	7,352,074	2.89
Dividends received	7,920,893	.59	1,383,400	.54
Bond interest received	1,585,763	.12	105,022	.04
Total	55,811,518	4.16	12,114,739	4.76
Total net income for 1927	117,431,105	8.75		
Total net loss for 1927			12,125,974	4.77
Cash dividends paid	58,710,752	4.37	7,155,248	2.81
Stock dividends paid	9,704,811	.72	223,731	.09
Total dividends paid	68,415,563	5.09	7,378,979	2.90
No. of corporations reporting	1,386		642	
Per cent active corporation reporting	68.34		31.66	

Income Statements

Our main interest, however, is in the analysis of the income statements. Corporations reporting net income have been kept separate from those reporting no net income. The former showed a gross profit from sales of 26.99 per cent, their "Cost of Goods Sold" being 73.01 per cent, while the "Cost of Goods Sold" figure in the case of corporations reporting no net income amounted to 83.93 per cent, making their Gross Profits from Sales 16.07 per cent, a difference of 10.92 per cent. That emphasizes the situation clearly enough. Had their gross profit margin been the same as in the case of the tax paying corporations, the increase of 10.92 per cent would have eliminated the *net* loss on Sales, of 9.98 per cent and left them a small margin of net profit. Obviously, there

must be a gross profit on Sales of at least 26 per cent above our "Cost of Goods Sold," if we are to break even. To make a reasonable *net* profit, there should be a gross profit on Sales of from 35 per cent to 40 per cent.

The "No Net Income" corporations were also higher than the money-making ones in other expenses as follows:—

	Per cent
Miscellaneous deductions	1.26
Depreciation	.41
Interest paid	2.41
Other taxes	.21
Bad debts	.16
	4.45

And lower in the following:—

Federal income tax	1.19
Depletion	.03
	1.22
A net increase of	3.23

Several items here should be noted, especially "Interest Paid." Whereas, the money-making corporations only paid $1.49 in interest for every $100.00 sales, the losses-making ones paid $3.90, an increase of $2.41 for every $100 worth of goods sold. Evidently many of them are hard pressed for money. They also took 41 cents more depreciation and lost 16 cents more in Bad Debts for every $100 sales, while their "Miscellaneous Deductions" and Other Taxes were $1.26 and 21 cents higher respectively. The larger amount charged for Depreciation is significant, (in that it tends to show a smaller volume of Sales in relation to Fixed Assets), as is the Bad Debt increase which represents an increase of 66 2/3 per cent.

Now for the question as to "What are we working for?" *Apparently it's about 4½ per cent on Sales,* when we make any money and when we don't, we give away nearly a dime with every dollar's worth of paper.

The Exact Figures

The exact figures are as follows: 1386 Corporations had gross sales in 1927 of $1,341,846,975. Their Net Profits on every $100 sales were 4.17 per cent, and in addition they had other profits from operations of 42 cents making $4.59 per $100.

Also 642 corporations sold $254,435,084 worth of products and made a net loss of $9.98 on each $100 sales, which was reduced to $9.53 as a result of a profit of 45 cents per $100 from other operations.

And 1927 was said to be a good average business year!

It would be very helpful to an understanding of the real situation, if we could relate these sales to the Capital invested. As it is, we cannot do more than hazard a guess about it. Figures collected in the past indicated that sales were from 100 per cent to 150 per cent of the Capital Invested. If we take the latter and most favorable figure, the "Total Profits from Operations" made by the "Net Income" corporations of $4.59 per $100 sales becomes a return of 6.88 per cent on each $100 of Capital invested, while the "Total Losses from Operations" of the "No Net Income" corporations of $9.53 per $100 Sales becomes a loss of $14.29 per $100 of Capital Invested. That's a big loss for the poor ones and little better than a mortgage—income return for the income tax-paying corporations. Even if a larger percentage of corporations in the Pulp and Paper Industrial Group made money in 1927 than in any other industrial group, they did not make much of it; of course, the fact is, some of them did much better than others, but if the average net profit from operations, was about 7 per cent on invested capital and this would seem to be a fair assumption, then for every mill that made 12 per cent on its investment, another one with an equal investment made only 2 per cent. It must not be forgotten either, that on the above basis for every two corporations, that made a profit of 7 per cent on their capital investment, there was one mill that lost over 14 per cent as a result of its operations.

Cost Work in the Paper Industry

As secretary-treasurer of the Cost Association of the Paper Industry for nine years, I would not be human if I failed to draw particular attention to the fact that a bigger proportion of corporations in the pulp and paper industry and the printing and publishing industry made money than in any other manufacturing group, because both our industry and the printing industry have worked hard to improve the accounting and cost procedure of its members.

As a matter of fact, the Cost Association has been working since 1918, while the United Typothetae was formed about 1908, so the latter organization has been doing this work for nearly twenty years and has spent large sums in developing it.

In both industries, competitive conditions are very severe, yet more of us were able to keep out of the red in 1927, and as this can only be accomplished under such conditions by sound business management based on a definite knowledge of the actual cost of manufacturing our different products, it is only fair to assume that part of the credit for this good showing belongs to the Cost Association of the Paper Industry and to the United Typothetae.

We have put our story over, but only partly. One third of our producers are working in the red or at least they were in 1927. These are the mills we are most interested in and these are the ones it is most difficult to reach. Naturally they are not taking on any annual liabilities, which they can possibly avoid and one such liability, which is quite easy to omit is membership in the Cost Association.

We give them some service anyway. We send them our Monthly Journal, "Pulp and Paper Profits," we edit the Cost Section in the PAPER TRADE JOURNAL and we invite them to our meetings and conventions, all of which costs money. This is supplied by those mills who realize the necessity of working for 100 per cent "Co-operative competition," viz: competition in costs and not in selling prices. It works in this way—if you cannot sell your product at a fair profit, you don't produce it; at least one branch of our industry has recently woken up to the fact that if they are to make any money at all, they must cut their cloth to suit the measure, so they have reduced their production to bring it more into line with the current demand; at least the largest producing unit in the industry has done this, and it is sincerely to be hoped that the others will follow suit instead of revoking.

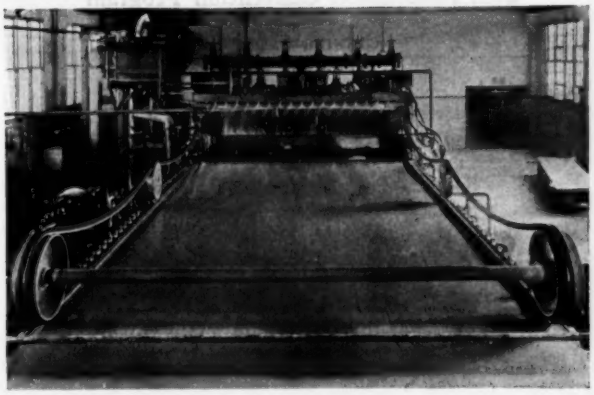
What Is a Fair Profit?

As the production goes down, the possibility of getting a price for our products, that will show a fair profit, increases. The next point is, what is a fair profit, and our answer is from 12 per cent to 15 per cent on the capital employed. It is easy to ascertain what the relationship is between our annual sales and the amount of capital employed. If we have $150 sales for every $100 capital employed and we want to make 12 per cent on the latter, then we must get 8 per cent net profit, on all sales—almost double what we're making. The essential things are to know our costs, and know them accurately, *then to sell only at a fair profit.*

There's another angle to these 1927 income statements that's interesting and that is the fact, that while the corporations reporting net income made Net Profits from Sales of $55,912,244 (4.17 per cent), they had other income of almost an exactly similar amount viz: $55,811,518 (4.16 per cent) made up as follows:—

		Per cent
Miscellaneous receipts	$39,272,854	2.93
Interest received	7,032,008	.52
Dividends received	7,920,893	.59
Bond interest received	1,585,763	.12
	$55,811,518	4.16

It would not be fair to say they made as much by investing part of their capital outside the paper industry as they did for the capital employed in the industry, because of some doubt as to what is included in "Miscellaneous Receipts," but such a statement would not be far wide of the truth. One thing is certain, and that is that these miscellaneous receipts do *not* include any "Profits from Operations." This other income brought the Total Net Income of the tax paying corporations up to 8.75 per cent of their Gross Sales. They paid 5.09 per cent of this out in dividends, leaving 3.66 per cent in surplus.



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Biggs' usual conservative policy marked the development of welded rotaries for the paper industry. Not until Biggs engineers were thoroughly convinced that Biggs All-welded Rotaries were absolutely uniform, safe and dependable, was the "Ready, go!" word issued. In this case, more than four years were consumed in painstaking, exhaustive research.

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You will get the same service and satisfaction from all Biggs products. Many examples of Biggs' work are shown in our latest folder, "Unusual Steel Plate Construction." There is a copy waiting for you.

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- Welded Globe Rotary Digesters
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BIGGS ROTARIES *for years of dependable cooking and bleaching...*

The "No Net Income" corporations made up about half their "losses from operations," amounting to $24,240,713 (9.53 per cent) out of other income amounting to $12,114,739 (4.76 per cent) made up as follows:—

		Per cent
Miscellaneous receipts	$3,274,243	1.29
Interest received	7,352,074	2.89
Dividends received	1,383,400	.54
Bond interest received	105,022	.04
	$12,114,739	4.76

In this case, it's quite fair to say that these mills not only lost $24,000,000 but they cost the tax-paying corporations millions by depressing prices and selling at less than their cost. They lost 9.98 per cent on their gross sales, and made a profit of .45 per cent from other operations, or a net loss of 9.53 per cent on gross sales, from operations. Their "other income" amounted to 4.76 per cent gross sales, leaving a total net loss of 4.77 per cent. In spite of this they paid 2.90 per cent on gross sales, in dividends, some of them even declaring "stock" dividends.

The Mills That Should Be Reached

These are the mills we want to reach, as we believe part of this poor business is due to inadequate cost knowledge mostly due to "averaging" costs of different grades of paper, and to lack of cooperation between the Production, Accounting and Sales Departments. In view of our 25 per cent surplus productive capacity, such cooperation is essential to good management. It is anyway, but especially so in our case.

We must take a decided stand and honestly answer the question "What are we working for?"

The U. S. Treasury Department does not publish untrue information. These are facts which cannot be denied. We know the situation, also that it will not right itself. Those of us, who cannot sell today at a reasonable profit, should first search out the "beam in our own eye," by thoroughly investigating the cost procedure in our mills to see if our costs are being accurately compiled, then compare them with the current market prices for our products. If they are too high, we must try and reduce our costs. If we cannot do this, we must try and increase our prices. If we canont do this, we had better go out of business at once, instead of waiting until we are forced out by lack of funds.

Judgment on Future Course

It's a difficult situation and a difficult time. All we can do is, to get at the facts (especially about our costs) and then use our best judgment in determining what our future course shall be. This applies especially to the smaller corporations, because of the fact that although the number of those making profits was twice the number of those making losses, the average gross sales of the profit-making group amounted to $968,143, while the average gross sales of those who lost $24,000,000 on operations, only amounted to $396,316. In other words, while the latter group included 31.66 per cent of the total active corporations, their total gross sales amounted to only 16 per cent of the total products sold, which surely indicates that generally speaking, it is the smaller corporations especially, that are selling their products below cost. They may not be doing it specifically to injure a competitor or lessen competition, but they are injuring many competitors just the same, although not as badly as they are injuring themselves. We suggest they frankly and fairly answer the question "What are we working for?"

Watervleit Has Good Year

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., January 30, 1930.—The year 1929 was a good one with the Watervleit Paper Company, a fact demonstrated by the payment of an extra one half of one per cent dividend in December. The plant is in fine physical condition and is operating at full schedule now, giving employment to nearly 500 hands. Officers have been elected for the ensuing year as follows: President, George K. Ferguson; vice president, Charles B. Hays; treasurer, August B. Scheid; secretary, John A. Pyl.

Cost Association Convention Program

TUESDAY, FEBRUARY 18, 1930

OPENING SESSION

In Parlor No. 2

9:00—9:45 A.M.—Registration.

9:45 A.M.—Address of Welcome, by President Ralph B. Hersey, Hollingsworth & Vose Company, Boston, Mass.

10:00 A.M.—Subject—*"Personnel Problems in Management."*
Speaker—Earl B. Morgan, Consulting Management Engineer, Philadelphia, Pa.

10:40 A.M.—Discussion on Mr. Morgan's Address.

10:55 A.M.—Adjournment to Banquet Room Foyer.

11:00 A.M.—Joint Session with Salesmen's Association of the Paper Industry in Banquet Room Foyer.
Subject—*"An Approach to a Marketing Problem."*
Speaker—Irving Fellner, Publishing Director of "System."

12:00 M. — Adjournment for Luncheon.

AFTERNOON SESSION

In Parlor No. 2

2:00 P.M.—Subject—*"Standard Costs, What They Are and How To Use Them."*
Speaker—Eric A. Cammen, C. P. A., Partner, Marwick, Mitchell & Co., New York City.

2:45 P.M.—Discussion on Mr. Cammen's Address.

3:15 P.M.—Subject—*"Fire Insurance and the Accountant."*
Speaker—Prentiss B. Reed, Assistant Manager, Phoenix Assurance Company, Ltd., New York City.

3:45 P.M.—Discussion on Mr. Reed's Address.

4:00 P.M.—Business Meeting.

WEDNESDAY, FEBRUARY 19, 1930

MORNING SESSION

In Parlor No. 2

9:30 A.M.—Open Forum.

10:00 A.M.—Subject—*"The Census of Distribution and the Pulp and Paper Industry."*
Speaker—J. A. C. Kavanagh, Statistician, American Paper & Pulp Association.

11:00 A.M.—Subject—*"Bonuses and Their Uses to Decrease Costs and Increase Profits."*
Speaker—George S. May, President, George S. May, Inc., Chicago and New York City.

11:45 A.M.—Discussion on Mr. May's Address.

12:00 M. — Adjournment for Luncheon.

12:30 P.M.—Special Luncheon for Executives.
Chairman—Col. B. A. Franklin, Vice-President, Strathmore Paper Company, Mittineague, Mass.
Subject—*"The Outlook for General Business and the Pulp and Paper Industry in 1930."*
Speaker—Dr. E. O. Merchant, Statistician, G. H. Mead Company.
Subject—*"Putting Profit Into Paper."*
Speaker—A. W. Ramsdell, Batten, Barton, Durstine & Osborn, Inc., Advertising Agents, New York City.
Adjournment—2:30 P.M. Sharp.

The Secretary-Treasurer will be pleased to meet any representatives of member or non-member mills, desiring to see him, in Parlor No. 2, immediately following the Luncheon.

Duebener's Pays Dividend

INDIANAPOLIS, Ind., February 3, 1930.—A dividend of 75 cents on each share of common stock after paying 7 per cent on preferred stock has been declared by Duebener's Shopping Bag, Inc., of this city, it was announced by W. H. Duebener, president, following a meeting of the stockholders of the company here. All officers and directors were re-elected at the meeting. Mr. Duebener reported that the last year was the most prosperous in the history of the company. A large amount of new equipment has been purchased looking forward to an even greater year in 1930, he said.

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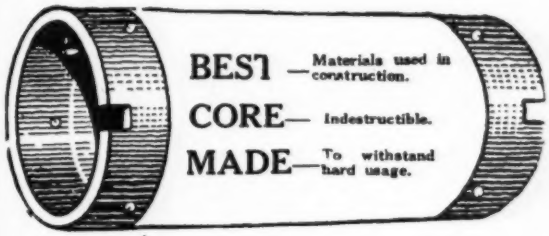
protects your rolls and insures their delivery to your customer in perfect condition. They eliminate claims for damages.

SHIPPING INSURANCE



Your two sources of supply are

Canadian Elixman Company
HAMILTON, ONTARIO

Elixman Paper Core Company
CORINTH, N. Y.

WOOD PULP AGENTS

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Manufacturers of

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MACHINE FINISHED BOOK
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Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

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IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING FEBRUARY 1, 1930

SUMMARY

Cigarette paper .....446 cs.
Wall paper .....34 bls., 23 cs.
Paper hangings .....28 bls., 11 cs.
News print .....5881 rolls
Printing paper .....102 cs., 136 rolls
Packing paper .....104 cs.
Wrapping paper .....27 bls., 59 cs.
Writing paper .....26 cs.
Parchment paper .....22 bls.
Decalcomania paper .....11 cs.
Colored paper .....24 cs.
Surface coated paper .....6 cs.
Barvta coated paper .....157 crates, 139 cs.
Metal paper .....15 cs.
Gold coated paper .....4 cs.
Photo paper .....5 cs.
Drawing paper .....13 cs.
Filter paper .....66 bls., 38 cs.
Filter material .....18 cs.
Tissue paper .....83 cs.
Caoutchouc paper .....8 cs.
Cover paper .....5 cs.
Transparent greaseproof paper .....30 cs.
Litmus paper .....2 cs.
Painted paper .....3 cs.
Card board .....100 cs.
Miscellaneous paper .. 2473 rolls, 323 bls., 188 cs.

CIGARETTE PAPER

Zorro Tobacco Co., Augvald, Lisbon, 20 cs.
American Tobacco Co., La Bourdonnais, Bordeaux, 250 cs.
De Manduit Paper Corp., Indep. Hall, Havre, 126 cs.
Liggett & Myers Tobacco Co., Samaria, Liverpool, 50 cs.

WALL PAPER

Thomas & Pierson, American Merchant, London, 2 cs.
J. E. Bernard & Co., Pr. Roosevelt, Bremen, 7 bls.
F. A. Binder, Berlin, Bremen, 5 bls.
American Express Co., Berlin, Bremen, 2 bls., 3 cs.
R. F. Downing & Co., Minnetonka, London, 19 bls., 8 cs.
Globe Shipping Co., St. Louis, Hamburg, 4 cs.
Whiting & Patterson Co., Inc., Olympic, Southampton, 5 cs.
F. J. Emmerich, Olympic, Southampton, 1 ble.
C. Grimmer & Son, De Grasse, Havre, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnetonka, London, 28 bls., 11 cs.

NEWS PRINT

Stora Kopperberg Corp., Gripsholm, Gothenburg, 84 rolls.
Star Co., Markland, Liverpool, N. S., 1742 rolls.
N. Y. Tribune Inc., Markland, Liverpool, N. S., 1906 rolls.
Clinton Paper Co., Markland, Liverpool, N. S., 399 rolls
Chase National Bank, Berlin, Bremen, 157 rolls.
Parsons & Whittemore, Inc., Berlin, Bremen, 319 rolls.
Perkins, Goodwin & Co., St. Louis, Hamburg, 290 rolls.
——, Bergensfjord, Oslo, 297 rolls.
H. Reeve Angel & Co., Inc., Sagoporack, Kotka, 287 rolls.
Journal of Commerce, Sagoporack, Kotka, 74 rolls.
Parsons & Whittemore, Inc., Sagoporack, Kotka, 326 rolls.

PRINTING PAPER

Keuffel & Esser Co., Pr. Roosevelt, Bremen, 55 rolls.
Rectigraph Co., Indep. Hall, Havre, 75 cs.
Dinglestedt & Co., Berlin, Bremen, 2 cs.
J. Beckhard, Berlin, Bremen, 12 cs.
C. A. Redden, Ausonia, Southampton, 27 rolls.
Globe Shipping Co., Bremen, Bremen, 1 cs.
E. Dietzgen & Co., Rotterdam, Rotterdam, 54 rolls.
F. C. Strype, Rotterdam, Rotterdam, 12 cs.

PACKING PAPER

American Express Co., St. Louis, Hamburg, 87 cs.
Atlantic F'd'g. Co., St. Louis, Hamburg, 13 cs.
J. J. Shore & Co., Rotterdam, Rotterdam, 4 cs.

WRAPPING PAPER

E. Dietzgen & Co., Rotterdam, Rotterdam, 59 cs.
R. Wilson Paper Corp., Rotterdam, Rotterdam, 27 bls.

WRITING PAPER

Japan Paper Co., Olympic, Southampton, 8 cs.
Guibout Freres, Olympic, Southampton, 14 cs.
The Eleto Co., Olympic, Southampton, 4 cs.

PARCHMENT PAPER

Walker Goulard Plehn Co., St. Louis, Hamburg, 22 bls.

DECALCOMANIA PAPER

C. W. Sellers, Berlin, Bremen, 6 cs.
C. W. Sellers, St. Louis, Hamburg, 2 cs.
C. W. Sellers, Bremen, 3 cs.

COLORED PAPER

S. Gilbert, Berlin, Bremen, 4 cs.
J. Beckhard, Berlin, Bremen, 2 cs.
Quality Art Novelty Co., St. Louis, Hamburg, 1 cs.
Judson F'd'g. Co., St. Louis, Hamburg, 13 cs.
L. Schulmann & Co., St. Louis, Hamburg, 4 cs.

SURFACE COATED PAPER

Globe Shipping Co., Pr. Roosevelt, Bremen, 3 cs.
Phoenix Shipping Co., St. Louis, Hamburg, 3 cs.

BARYTA COATED PAPER

Globe Shipping Co., Berlin, Bremen, 138 cs.
J. H. Schroeder Banking Corp, Berlin, Bremen, 157 crates.

METAL PAPER

Hensel, Bruckman & Lorbacher, Berlin, Bremen, 15 cs.

GOLD COATED PAPER

F. Murray Hill Co., Berlin, Bremen, 4 cs.

PHOTO PAPER

J. J. Gavin, Olympic, Southampton, 5 cs.

DRAWING PAPER

Keuffel & Esser Co., Pr. Roosevelt, Bremen, 6 cs.
H. Reeve Angel & Co., Inc., Minnetonka, London, 6 cs.
J. Henschel & Co., St. Louis, Hamburg, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnetonka, London, 5 cs.
H. Reeve Angel & Co., Inc., Olympic, Southampton, 66 bls., 33 cs.

FILTER MATERIAL

Gerhard & Hey, Pr. Roosevelt, Bremen, 18 cs.

TISSUE PAPER

F. C. Strype, Chickasaw, Helsingfors, 76 cs.
Meadows Wye & Co., Samaria, Liverpool, 4 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 3 cs.

CAOUTCHOUC PAPER

American Express Co., St. Louis, Hamburg, 8 cs.

COVER PAPER

Int'l. Forwarding Co., St. Louis, Hamburg, 5 cs.

TRANSPARENT GREASEPROOF PAPER

Amex. Co., Rotterdam, Roterdam, 30 cs.

LITMUS PAPER

Phoenix Shipping Co., Liverpool Maru, Hamburg, 2 cs.

PAINTED PAPER

A. C. Dodman, Jr., Inc., De Grasse, Havre, 3 cs.

CARD BOARD

American Express Co., St. Louis, Hamburg, 100 cs.

MISCELLANEOUS PAPER

Keller Dorian Paper Co., Indep. Hall, Havre, 6 cs.
E. Dietzgen & Co., Liverpool Maru, Hamburg, 50 cs.
Finlay Holt & Co., Roma, Genoa, 4 cs.
Oxford University Press, Samaria, Liverpool, 7 cs.
The Borregaard Co., Inc., Sagoporack, Gothenburg, 1989 rolls, 275 bls.
The Boregaard Co., Inc., Gripsholm, Gothenburg, 28 bls., 165 rolls.
D. S. Walton & Co., Gripsholm, Gothenburg, 232 rolls, 20 bls.
Cohoes Envelope Co., Gripsholm, Gothenburg, 87 rolls.
Coenca Morrison Co., De Grasse, Havre, 2 cs.
Standard Products Corp., De Grasse, Havre, 87 cs.
Keller Dorian Paper Co., De Grasse, Havre, 32 cs.

RAGS, BAGGINGS, ETC.

P. Berlowitz, Augvald, Alexandria, 108 bls. rags.
N. Y. Trust Co., Augvald, Alexandria, 148 bls. rags.
S. E. Ingber, Augvald, Alexandria, 159 bls. rags.
Darmstadt, Scott & Courtney, Augvald, Alexandria, 120 bls. rags.
S. Birkenstein & Co., Augvald, Alexandria, 183 bls. bagging.
Van Oppen & Co., Pr. Roosevelt, Bremen, 151 bls. bagging.
Guaranty Trust Co., Pr. Roosevelt, Bremen, 50 bls. rags.
A. W. Fenton, Inc., Pr. Roosevelt, Bremen, 64 bls. rags.
Cohen & Son, Indep. Hall, Havre, 10 bls. new cuttings.
V. Galaup, Indep. Hall, Havre, 8 bls. new cuttings.
Katzenstein & Keene, Inc., Indep. Hall, Dunkirk, 53 bls. rags.
V. Galaup, Indep. Hall, Dunkirk, 10 bls. rags.
W. Steck & Co., Indep. Hall, Dunkirk, 56 bls. rags.
F. Stern, Berlin, Bremen, 21 bls. rags.
Brown Bros. & Co., London Corp., Dundee, 114 bls. rags.
Castle & Overton, Inc., London Corp., Dundee, 128 bls. rags.
J. Cohen & Son, London Corp., Dundee, 31 bls. rags.
T. D. Downing & Co., Transylvania, Glasgow, 188 bls. paper stock.
A. H. Searle, Inc., Transylvania, Glasgow, 55 bls. paper stock.
Albany Fibre Co., Samaria, Liverpool, 123 bls. rags.
American Shipping Co., Hellig Olav, Copenhagen, 11 bls. rags.
E. J. Keller Co., Inc., Ontario, ——, 69 bls. rags.
Int'l. Germanic Trust Co., Ontario, Dunkirk, 124 bls. flax waste.
Int'l. Germanic Trust Co., Ontario, Havre, 65 bls. rags.
Irving Trust Co., Coelleda, Manchester, 47 bls. paper stock.
N. Schwab & Son, Coahoma County, Rotterdam, 50 bls. rags.
Van Oppen & Co., Coahoma County, Rotterdam, 346 bls. bagging.
E. J. Keller Co., Inc., Coahoma, County, ——, 62 bls. rags.
E. J. Keller Co., Inc., Rotterdam, ——, 34 bls. rags.
Van Oppen & Co., Rotterdam, Rotterdam, 58 bls. rags.
Van Oppen & Co., Rotterdam, Rotterdam, 38 bls. bagging.
V. Galaup, Schodack, Havre, 84 bls. rags.
V. Galaup, Schodack, Dunkirk, 95 bls. rags.
Irving Trust Co., Schodack, Dunkirk, 115 bls. rags.

(Continued on page 86)

Pulp Mill Knives for
Chippers
Barkers
Hogs
Shredders

Paper Mill Knives for
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Beaters
Refiners
Jordans
Rotary Sheet Cutters
Trimmers
Flat Bed Cutters

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BED PLATES
Maintain straight, clean, square edges over their entire length—wear evenly—last longer.
Elbow—Triple angle, diagonal fibre drawing—Sharp rapid reduction.
Write for information and prices.

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BOLTON QUALITY
Specialists in pulp and Paper Mill Knives For Twenty-Five Years
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All kinds and styles of Felts for all kinds and styles of Papers.

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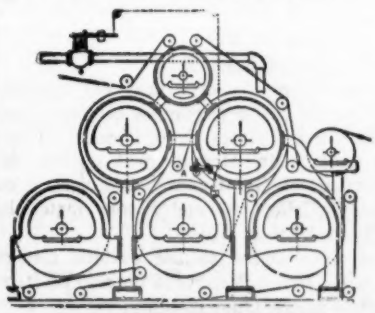

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Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES Buckland, Conn.

Imports of Paper and Paper Stock

(*Continued from page 84*)

N. Y. Trust Co., Cabo Espartel, Genoa, 46 bls. rags.
S. Birkenstein & Son, Cabo Espartel, Alicante, 85 bls. rags.

OLD ROPE

Brown Bros. & Co., Hellig Olav, Copenhagen, 125 coils.
Brown Bros. & Co., Leverkusen, Hamburg, 59 coils.
Brown Bros. & Co., Rotterdam, Rotterdam, 84 coils.
International Purchasing Co., Cabo Espartel, Cadiz, 287 coils.

CASEIN

Kalbfleisch, Corp., Southern Cross, B. Ayres, 784 bags.
National City Bank, The Angeles, Buenos Ayres, 2118 bags, 227627 lbs.

WOOD PULP

J. Andersen & Co., Liverpool Maru, Hamburg, 275 bls. wood pulp, 55 tons.
Lagerloef Trading Co., Chickasaw, Helsingfors, 677 bls. wood pulp, 101 tons.
Lagerloef Trading Co., Chickasaw, Raumo, 1280 bls. wood pulp, 211 tons.
Castle & Overton, Inc., St. Louis, Hamburg, 530 bls. wood pulp, 79 tons.
——, St. Louis, Hamburg, 130 bls. wood pulp, 26 tons.
Atterbury Bros., Inc., Hellig Olav, Oslo, 750 bls. wood pulp, 150 tons.
Bank of N. Y., Hellig Olav, Oslo, 150 bls. wood pulp, 25 tons.
Atterbury Bros., Inc., Bergensfjord, Kotka, 307 bls. wood pulp 52 tons.
——, Sagoporack, Tolkis, 545 bls. wood pulp, 110 tons.
E. M. Sergeant & Co., Gripsholm, Gothenburg, 1099 bls. wood pulp.
Johanson Wales & Sparre, Inc., Gripsholm, Gothenburg, 299 bls. wood pulp.

WOOD PULP WADDING

Sylvania Industrial Corp., Rotterdam, Rotterdam, 50 bls.

WOOD FLOUR

Bakelite Corp., Coahoma County, Rotterdam, 597 bags, 49570 ks.
State Chemical Co., Coahoma County, Rotterdam, 535 bags, 32870 ks.
F. W. Schmalz, Rotterdam, Rotterdam, 200 bags.

WOOD PULP BOARDS

Lagerloef Trading Co., Chickasaw, Helsingfors, 167 bls., 172 rolls, 99 tons.
Lagerloef Trading Co., Sagoporack, Kotka, 53 bls., 48 rolls, 29 tons.

PHILADELPHIA IMPORTS

WEEK ENDING FEBRUARY 1, 1930

Baco Com'l. Italiane Trust Co., Carnia, Naples, 28 bls. rags.
Guaranty Trust Co., Ontario, Havre 138 bls. rags.
E. Mayer, Ontario, Havre, 35 bls. rags.
Equitable Trust Co., Ontario Havre 117 bls. rags.
——, Ontario, Havre, 248 bls. rags.
——, Ontario, Dunkirk, 384 bls. bagging 43 bls. rags.
Castle & Overton Inc., Schodack, Havre, 287 bls. rags.
J. A. Steer & Co. Schodack, Havre, 7 bls. rags.
Darmstadt, Scott & Courtney, Schodack, Havre, 41 bls. rags.
A. Hurst & Co., Schodack, Havre, 82 bls. rags.
V. Galaup, Schodack, Havre, 100 bls. rags.
G. Mathes & Co., Schodack, Havre, 74 bls. rags.
D. I. Murphy, Schodack, Havre, 718 bls. rags.
J. A. Steer, Schodack, Dunkirk, 50 bls. rags.
G. Mathes & Co., Schodack, Dunkirk, 30 bls. rags.
Darmstadt, Scott & Courtney, Schodack, Dunkirk, 59 bls. rags.
Castle & Overton, Inc., Schodack, Dunkirk, 165 bls. rags.
J. M. Hagy Waste Works, Schodack, Dunkirk, 45 bls. rags.
E. J. Keller Co., Inc., Burgerdyk, ——, 194 bls. old rags; 49 bls. new rags.
E. J. Keller Co., Inc., Estrella, ——, 138 bls. old rags.
E. J. Keller Co., Inc, Natirar, ——, 98 bls. old rags.
E. J. Keller Co., Inc., Friesland, ——, 92 bls. old rags.
Parsons & Whittemore, Inc., Leverkusen, ——, 1200 bls. sulphite pulp.
Parsons & Whittemore, Inc., Malmen, ——, 204 bls. sulphite pulp.

PORTLAND IMPORTS

WEEK ENDING FEBRUARY 1, 1930

Lagerloef Trading Co., Chickasaw, Helsingfors, 1479 bls. wood pulp, 228 tons.
Lagerloef Trading Co., Chickasaw, Raumo, 15875 bls. wood pulp, 2723 tons.
Lagerloef Trading Co., Sagoporack, Kotka, 340 bls. sulphate, 56 tons; 10 rolls boards, 2 tons.
Central National Bank, Sagoporack, Stockholm, 1200 bls. sulphite, 203 tons.
——, Sagoporack, Tolkis, 2470 bls. sulphite, 501 tons.
——, Sagoporack, Kotka, 513 bls. sulphate, 88 tons.

NORFOLK IMPORTS

WEEK ENDING FEBRUARY 1, 1930

Darmstadt, Scott & Courtney, Coelleda, Manchester, 144 bls. bagging.

BOSTON IMPORTS

WEEK ENDING FEBRUARY 1, 1930

M. Gottesman & Co., Inc., Alberta, Sebenico, 4200 bls. wood pulp.
Lagerloef Trading Co., Chickasaw, Raumo, 1469 bls. wood pulp, 247 tons.
Scandinavian Pulp Agency, Inc., Sagoporack, Gothenburg, 2540 bls. kraft pulp, 508 tons; 508 bls. sulphite, 101 tons.
J. Andersen & Co., Sagoporack, Gothenburg, 1920 bls. sulphite, 389 tons.
——, Sagoporack, Kotka, 4196 bls. sulphite, 734 tons.
——, Sagoporack, Kotka, 2032 bls. sulphate, 406 tons.
Irving Trust Co., Sagoporack, Kotka, 960 bls. sulphate, 158 tons.
——, Irving Trust Co., Sagoporack, Tolkis, 3250 bls. sulphite 659 tons.
Atterbury Bros, Inc., The Angeles, B. Ayres, 834 bags casein, 50040 ks.
Parsons & Whittemore, Inc., Furstbulow, ——, 260 bls. sulphite.
1st National Bank of Boston, The Angeles, B. Ayres, 417 bags casein, 25020 ks.

BALTIMORE IMPORTS

WEEK ENDING FEBRUARY 1, 1930

Baltimore Trust Co., Ontario, Dunkirk, 202 bls. rags.
National City Bank, Ontario, Havre, 12 bls. rags.
Parsons & Whittemore, Inc., Mexicano, ——, 250 bls. sulphite.
Parsons & Whittemore, Inc., Furstbulow, ——, 1689 bls. wood pulp.

Scandinavian Countries Increase Production

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 15, 1930.—There is considerable new construction activity in the Scandinavian paper producing countries at present, especially in Sweden, which will add considerably to their productive capacity. Projects recently completed, now under construction, or contemplated will add to Swedish production as follows: Groundwood 30,000 metric tons, bleached sulphite 25,000 tons, unbleached sulphite 7,500 tons, sulphate 219,000 tons, kraft paper 40,000 tons, and other classes of paper 7,000 tons. In Finland the Veitsiluoto Mills and the Waldhof Company expect to commence operations in the spring of 1930, which will add 30,000 tons respectively to the Finnish output of bleached sulphite and unbleached sulphite. A third plant, situated at Warkaus will also increase its output of sulphite pulp—by 12,000 tons a year, and the Serlachius paper company its paper production by 8,000 tons. A Norwegian concern is also planning an increase in its paper output of 8,000 tons.

Little Change in Swedish Paper Market

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 22, 1930.—Little change was observable in the Swedish paper market during the first half of December, reports received here state.

The kraft market was if anything weaker with corresponding effect on prices. Considerable amounts of sulphite wrappings were disposed of in the domestic market for 1930 delivery as well as to British and continental buyers.

Junior Paper Technologist

Applications for junior paper technologist must be on file with the Civil Service Commission at Washington, D. C., not later than April 8. The examination is to fill vacancies in the Bureau of Standards, Department of Commerce; in the Geological Survey, Department of the Interior, and in positions requiring similar qualifications, for duty in Washington, D. C., or in the field.

The entrance salary is $2,000 a year. Higher-salaried positions are filled through promotion. Competitors will be rated on general chemistry, elementary physics, and mathematics up to and including calculus; and practical questions on paper technology.

Full information may be obtained from the United States Civil Service Commission at Washington, D. C., or the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city.

Cellophane Changes

The DuPont Cellophane Company announces the appointment of A. S. Allen to handle the development of Cellophane as a utility material. Mr. Allen replaces F. R. Downes on this industrial development work. Mr. Downes will assume the position of general manager of the Lamicel Products, Inc., manufacturers of laminated Cellophane and fibrous materials, for the millinery, novelty and other fields.

Wilfred E. Lock has been added to the eastern district sales organization, and will succeed Mr. Allen on the Western New York, Pennsylvania, Eastern Ohio territory.

Ben Cameron has joined the Technical Service Section, and E. F. Leahy has been added to the Cellulose Cap Division.

DOUBLE CAPACITY LESS JORDANING—LESS POWER!

Here is Dayton Beater's record at National Folding Box Co., New Haven, Conn.: First order—1 Dayton Beater; six months later, 3 more Daytons! Doubled their beater capacity with 80% less power per ton; cut their jordaning with a 25% saving in jordan power. ....Satisfactory? Certainly! And we can do as much for your mill. Ask us.

The Dayton Beater & Hoist Co., Dayton, Ohio

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High Speed Beaters

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***Cotton Stencilling (Jacquard)* Papers**

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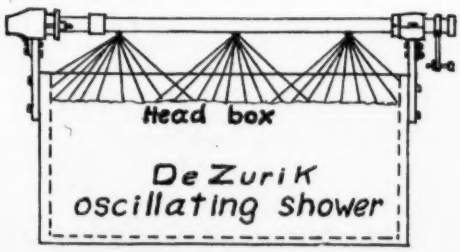

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Eliminates Slime and Foam Trouble
Uses ¾ Less Water

Washes sides of box—Dams—screen inlets—and back of slice *clean*. This one shower does the work of three or four stationary pipes.

ALSO FELT AND WIRE SHOWERS

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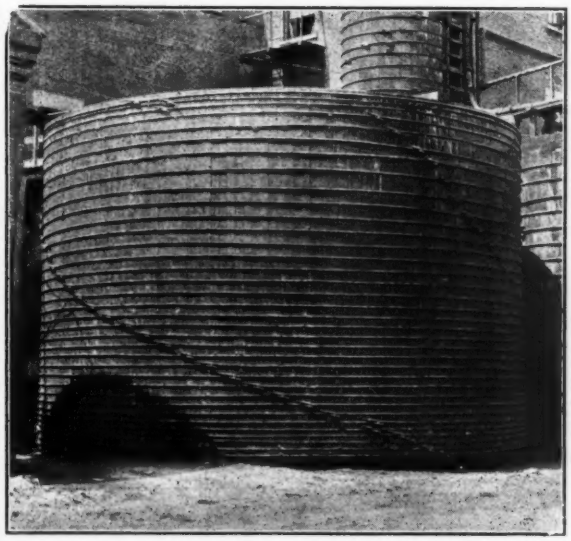
Sartell **Minnesota**

WOOD TANKS TILE



Blow Pit and Vomit Stack at Marathon Paper Company Mill.

NO TANK is too large and none too small for our tank-making equipment and stocks. We cater to the needs of the paper industry. Blow Pits, Vomit Stacks, Stock Tanks, Acid Storage Tanks, Stuff Chests, Agitators, etc. See our Condensed Catalog in Paper and Pulp Mill Catalog. Ask us about our Glazed Tile Tanks.

Tank Builders Since 1867

KALAMAZOO TANK AND SILO CO.

KALAMAZOO, **MICHIGAN**

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, February 5, 1930.

Trading in the local paper market was moderately active during the past week. The various standard grades of paper were in seasonal request. Prices are holding to schedule on most of the grades, although weakness has developed in some sections, due to over-production and intense competition for desirable orders. Sales forces of the leading paper organizations are anticipating a heavy spring trade and the outlook for the future is fairly encouraging.

No further developments have been reported in the news print situation, although a satisfactory solution of the problem is still hoped for. According to statistics gathered by the News Print Service Bureau, production was maintained at 71 per cent of capacity during the past week. Shipments proceeded at approximately 73 per cent of rating. Stocks at the mills are not excessive.

The position of the paper board market is practically unchanged, and the price situation remains unsatisfactory. Conditions in the fine paper market are fairly satisfactory and prices are holding to schedule, in most instances. The coarse paper market continues quiet. Kraft paper business shows no signs of improving and the industry is faced with a large over-production. Prices continue weak.

Mechanical Pulp

Demand for both domestic and imported ground wood is persistent and the market is exhibiting a strong undertone. Production at home and abroad has been considerably curtailed of late, and as a result, offerings are scarce. The contract movement is well up to average. Prices are being maintained at previously quoted levels and there is little talk of concessions around.

Chemical Pulp

Steadiness prevails in the chemical pulp market. While trading has been rather light of late, the industry is considered to be in a sound position. Foreign and domestic producers are reported to be well sold ahead on most of the grades. Strong unbleached and easy bleaching sulphite pulps are exceptionally firm. No further price changes have been reported since last week.

Old Rope and Bagging

The old rope market is showing some signs of improvement. More mill interest appears to be developing in domestic and imported old manila rope. Mixed rope is fairly active. Prices are holding to formerly quoted levels. Most of the business transacted in the bagging market was along routine lines. Prices remain unchanged.

Rags

Seasonal conditions are being experienced in the domestic rag market. Cotton cuttings are in somewhat better demand than of late. Roofing rags are also in improved request. Offerings of mixed rags are limited, due to curtailed collections. Domestic rag quotations are mostly steady. The foreign rag market is practically unchanged. Brokers abroad are still asking high prices.

Waste Paper

There was little improvement noticed in the paper stock market, although more inquiries are being received from the board mills for the lower grades. The higher grades continue in normal request for the season. Book stock is fairly steady. Soft white shavings are moving in satisfactory volume. No radical changes have been reported on the various grades.

Twine

The undertone of the twine market was fairly strong. Demand for the various grades is normal for the season. With the approach of spring greater activity is anticipated shortly. When discussing the future trend, most observers are optimistic. Prices are being maintained at previously quoted levels.

Rayon Unsuitable as a Paper-Making Material

WASHINGTON, D. C., Feb. 3, 1930.—Rayon, unlike cotton or wood fibers from which it is made, is not suitable for a paper-making material, according to laboratory tests conducted at the Bureau of Standards which show that it is not only valueless in paper-making stock but may actually be detrimental to the quality of the paper.

The rayon used in the tests was submitted to the same manufacturing processes as rags are in the production of high-grade papers. Cotton and linen rags are commonly used as the fibrous material for fine paper when strength and durability are desired, and the presence of any other fiber which would adversely affect the quality of the paper is to be avoided. Since rayon has become established as a leading raw material in the textile industry, however, increasing amounts are being found in the rag stock supplied for paper making. Data on the value of rayon when submitted to the paper-making treatment, usually given such materials, is therefore of interest to the rag-paper industry.

Owing to loss of strength when wetted, the rayon filaments tended to break into short lengths during the pulping operations without the fibrillation and fraying necessary for good felting in the formation of the sheet. As a consequence the sheets from rayon lacked the strength to withstand the handling required in the subsequent pressing and drying operations, and the pliability character of rag papers. This investigation will be fully described in the February number of the Bureau of Standards Journal of Research.

New Style of Multiwall Valve Bag

WATERTOWN, N. Y., February 3, 130.—Recent developments at the Coty Machine Company include the invention of a new style of multiwall valve bag which is used for holding cement, lime, plaster and other purposes. It is understood that a number of large bag manufacturers are planning to manufacture the new type of bag on a large scale using Coty equipment in the process. The company is said to have perfected a type of bottom which not only gives flexibility and great strength but also provides a considerable saving in raw material. The new style bags can be turned out at a speed of 100 per minute and patents have already been applied for in the United States and foreign countries.

Recent tests of the new style bags exceeded expectations of the inventor who realized the importance of the invention but did not exactly appreciate its strength. The tests were made before representatives of a large paper mill firm and proved entirely satisfactory. The new bag was filled with an amount of cement before being dropped from a certain height and not once did the new bag break.

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Proportioning and Metering System as an efficient screen.

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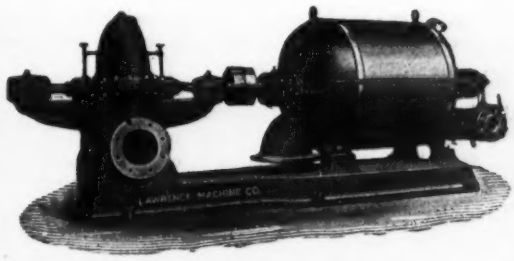

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Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, February 5, 1930.

BLANC FIXE.—Trading in the blanc fixe market was fairly active during the past week. The contract movement was well up to average. Prices remain unchanged. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The position of the bleaching powder market is practically unchanged. Contract shipments are going forward in seasonal volume. Prices are generally holding to schedule. Bleaching powder is still selling at from $2.00 to $2.35 per 100 pounds, in drums, at works.

CASEIN.—There were no radical changes in the casein market. Domestic casein is still quoted at from 14½ cents to 15½ cents per pound, while Argentine standard ground is selling at from 14½ cents to 15 cents, and finely ground at from 15 cents to 15½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—The caustic soda market was moderately active. Shipments against contract are moving in fair volume. Prices remain unaltered. Solid caustic soda is quoted at from $2.90 to $2.95, and the flake and the ground at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—Demand for imported and domestic china clay is fairly persistent. Prices are steady and unchanged and there is little talk of concessions. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—Business in the chlorine market was brisk and a good volume of contract renewals were booked at recently quoted levels. Supplies are going forward in a satisfactory manner. Chlorine is still selling at $2.50 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The trend of the rosin market was slightly easier. The grades of gum rosin used in the paper mills are now quoted at from $8.10 to $8.40 per 280 pounds, in barrels, on dock. Wood rosin is selling at from $6.55 to $7.70 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Offerings of salt cake continue scarce and the market is exhibiting a strong undertone. Contract shipments are heavy. Prices are decidedly firm. Salt cake is still quoted at from $22 to $25 per ton, while chrome salt cake is selling at from $20 to $21 per ton, in bulk, at works.

SODA ASH.—Some improvement was noticed in the soda ash market. Supplies are moving into consumption in better volume than of late. Prices are generally holding to schedule and shading is infrequent. Contract quotations, in car lots, at works, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Paper mill demand for starch is fairly well sustained. Offerings are about sufficient to take care of current requirements. Prices are generally holding to previously quoted levels. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $4.09 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Steadiness prevails in the sulphate of alumina market. Shipments against contract are going forward in normal volume. Prices remain unchanged. Commercial grades are quoted at from $1.40 to $1.55, and iron free at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—Conditions in the sulphur market are satisfactory. Prices are steady. Sulphur is quoted at $18 per ton, at mine, for 1,000 tons, or over, on yearly contracts, and at $20 per ton for any smaller quantity over the same period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Most of the business transacted in the talc market was along routine lines. The contract movement is normal. Prices are holding to schedule. Domestic talc is quoted at from $16 to $18 per ton, in bulk, at eastern mines, while imported talc is selling at from $18 to $20 per ton, in bags, ship side.

Market Quotations

Paper
(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@53.25
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.00	@ 6.50
No. 2 Domestic	3.87½	@ 5.00
Southern	3.75	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	37.50	@40.00
Straw	52.50	@55.00
Chip	35.00	@37.50
Binders' Boards	65.00	@70.00
Wood Pulp	80.00	@85.00
65 Test Jute Liner	45.00	@47.50
85 Test Jute Liner	50.00	@55.00
Sgl. Mla. Ll. Chip	47.50	@50.00

Mechanical Pulp
(On Dock)

No. 1 Imported—		
Moist	30.00	@32.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	28.00	@32.00
Screenings	15.00	@20.00

Chemical Pulp
(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.30	@ 4.25
Easy Bleaching	2.90	@ 3.15
No. 1 strong unbleached	2.65	@ 2.75
Mitscherlich unbleached	2.70	@ 3.00
No. 2 strong unbleached	2.40	@ 2.60
No. 1 Kraft	2.35	@ 2.50
No. 2 Kraft	2.30	@ 2.40
Sulphate—		
Bleached	3.40	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.20	@ 4.75
Easy Bleaching Sulphite	2.65	@ 3.00
News Sulphite	2.50	@ 2.70
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.10	@ 3.30
Soda Bleached	3.10	@ 3.25
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags
New Rags
(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	9.50	@10.50
New White, No. 2	7.50	@ 8.00
Silesias No. 1	7.50	@ 8.00
New Unbleached	10.50	@11.00
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Blue Overall	7.25	@ 7.75
Washables	4.75	@ 5.25
Fancy	5.50	@ 6.00
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rags

White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags
New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.00	@10.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50

Old Rags

No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	2.00	@ 2.10
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.95	@ 2.10
Dutch Blue Cottons	2.20	@ 2.35
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.10	@ 2.20
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.55	@ 1.60
Old Shopperies	1.50	@ 1.55
New Shopperies	1.50	@ 1.55
French Blues	2.10	@ 2.25

Old Rope and Bagging
(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.50	@ 1.60
Domestic	1.60	@ 1.70
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.60	@ 1.70
Bright Bagging	1.60	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.25	@ 4.50
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers
(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.00	@ 3.25
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.40	@ 2.55
White envelope cuttings	2.90	@ 3.10
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag.	1.45	@ 1.55
Solid Flat Book	1.40	@ 1.50
Crumpled No. 1	1.00	@ 1.10
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.45	@ .55
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.50	@ 1.75
Extra No. 1 old	1.25	@ 1.35
Print	.60	@ .65
Container	.40	@ .50
Bogus Wrapper	.60	@ .65
Old Kraft Machine Compressed bales	1.65	@ 1.75
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.55	@ .65
Strictly Folded	.45	@ .55
No. 1 Mixed Paper	.25	@ .30
Common Paper	.15	@ .20

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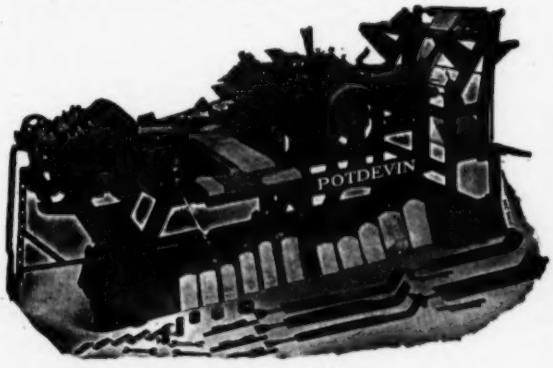

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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	4.25	@	4.50
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¼
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	42.50
Solid News	47.50	@	—
Solid News	40.00	@	45.00
Manila Lined Chip	50.00	@	55.00
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.35	@	2.40
White Env. Cuttings	2.60	@	2.65
No. 1 Soft Shavings	2.10	@	2.15
No. 1 Mixed	.60	@	.70
No. 2 Mixed	.50	@	.60
Ledger & Writings	1.25	@	1.35
Solid Books	1.05	@	1.10
Blanks	1.60	@	1.65
Kraffs	1.65	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.75	@	1.80
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.60	@	.70
Folded News (overissue	.60	@	.65
Old Newspapers—			
No. 1	.60	@	.65
No. 2	.50	@	.55
Mixed Papers—			
No. 1	.40	@	.50
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.05	@	.06
No. 1 Kraft	.06	@	.06½
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	
Straw Board	52.50	@	70.00
News Board	37.50	@	40.00
Chip Board	35.00	@	47.50
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	55.50	@	57.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	07½
Silesias, No. 1	.07	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy	.05½	@	.06
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.80	@	2.90
No. 2 Soft White	1.80	@	1.90
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.30	@	1.40
No. 1 Books, heavy	1.25	@	1.35
No. 2 Books, light	.90	@	1.00
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.40	@	.50
Container Manila	.25	@	.35
Old Kraft	1.60	@	1.70
Common paper	.15	@	.20
No. 1 Mixed Paper	.15	@	.20
Straw Board, Chip	.40	@	.50
Binders Board, Chip	.35	@	.45
Overissue News	.60	@	.70
Old Newspaper	.25	@	.30

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2	2.00	@	2.25
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.01½	@	.01¼
No. 2	1.20	@	1.25
No. 3 (Roofing)	1.10	@	1.20
No. 4	1.00	@	1.10
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.12½
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.06¼	@	.06½
No. 2 Kraft	.03¾	@	.05
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	52.50
Single White, Patent Coated Newsboard Bender	65.00	@	80.00
Wood Pulp Board	75.00	@	80.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.40	@	2.50
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	.90	@	1.00
White Blank News	1.60	@	1.70
Old Kraft	1.55	@	1.65
Print Manila	.80	@	.90
No. 1 Mixed Paper	.30	@	.35
Overissue News	.45	@	.55
Old Newspapers	.45	@	.50
Box Board, Chip	.45	@	.50

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	1.40	@	1.55
Manila Rope—			
Foreign	4.25	@	4.40
Domestic	—	@	4.50
Transmission Rope	—	@	2.75
Mixed Strings	.90	@	1.00
Jute Wool Strings	1.00	@	1.05
Jute Carpet Threads	1.05	@	1.15
Scrap Burlaps	—	@	1.35
Scrap Sisal	1.55	@	1.75
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	1.60	@	—
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	3.00	@	3.12½

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.08½	@	—
Silesias, No. 1	.06	@	06¼
New Unbleached	.09¾	@	—
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¾
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.25	@	2.50
Miscellaneous	1.75	@	1.90
Black Stockings	—	@	4.00
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.40	@	1.50
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.50	@	1.55
New No. 1 Shirt Cuttings	9.00	@	9.50
Dutch Blues	2.00	@	2.12½
Lace Curtains	4.75	@	5.00
New Checks & Blues	4.25	@	4.60
Old Fustians	1.90	@	2.00
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00		—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	31.00	@	32.00
Sulphite easy bleaching	60.00	@	—
Sulphite news grade	60.00	@	—
Sulphite, bleached	77.00	@	78.00
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.85	@	—
Strictly Folded	.85	@	—
No. 1 Mixed Paper	.65	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.09¾	@	.10
Fancy Shirt Cuttings	.06	@	.06¼

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